

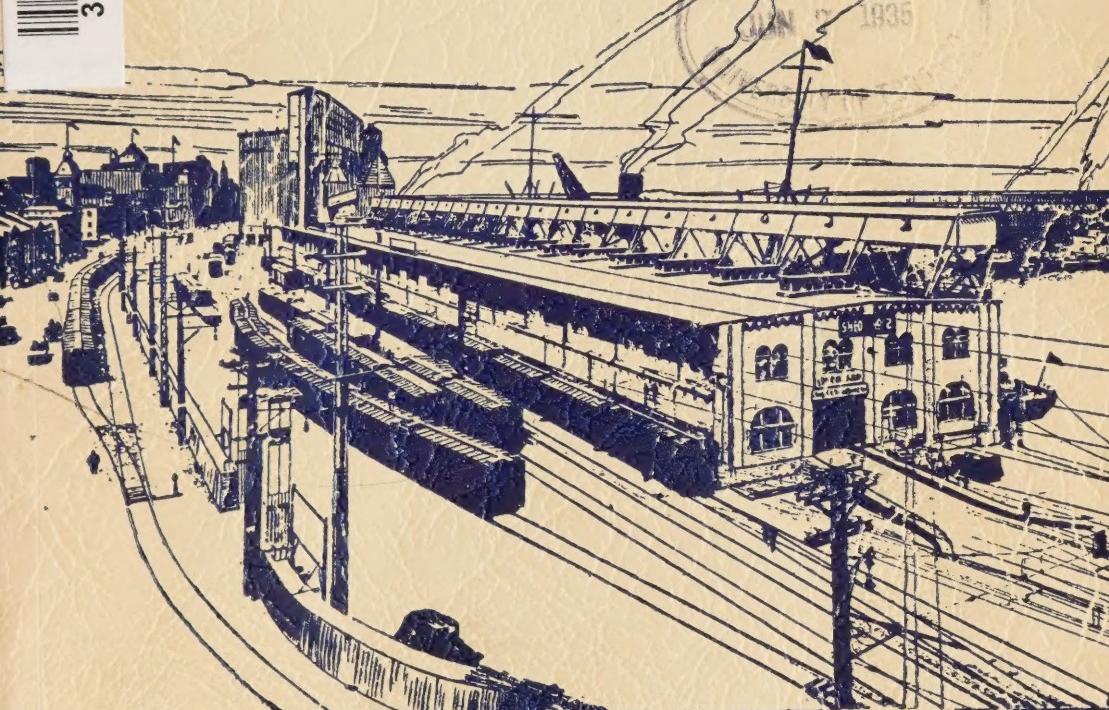
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# The HARBOUR of MONTREAL

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# ANNUAL REPORT OF THE Harbour Commissioners of Montreal

*For the Year 1934*

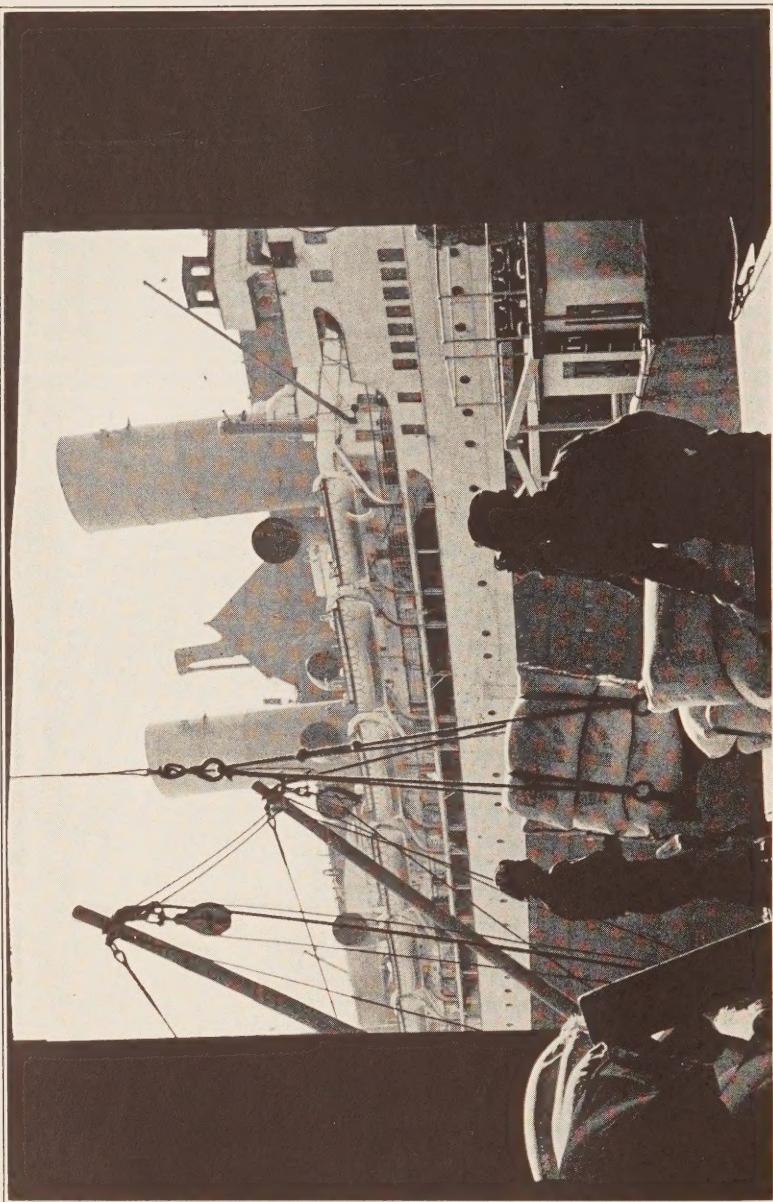


COMMISSIONERS:

JOHN C. NEWMAN, President  
LT-COL. H.-J. TRIHEY, K.C.  
ALPHONSE RAYMOND

HANDLING FREIGHT AT A HARBOUR SHED

Photo: Associated Screen News



Harbour Commissioners of Montreal

MONTREAL, 1st April, 1935.

To the Hon. Alfred DURANLEAU, K.C., M.P.,

Minister of Marine,

Ottawa, Ont.

Sir:—

In compliance with Section 51 of the Commissioners' Act, 57-8 Victoria, Chapter 48, the Harbour Commissioners of Montreal herewith respectfully submit their Annual Report of operations for the year ended 31st December, 1934.

We have the honour to be,

Sir,

Yours very respectfully,

**John C. NEWMAN**, President.

**H. J. TRIHEY**,

**Alphonse RAYMOND**,

Harbour Commissioners.

IN PRESENTING their Annual Report for the year Nineteen Hundred and Thirty-four, the Harbour Commissioners of Montreal wish to record their appreciation of the support and co-operation of the Minister of Marine, Hon. Alfred Duranleau, the Acting Deputy Minister, and the other officers of the Department at Ottawa.

# Harbour Commissioners of Montreal

## ANNUAL REPORT

### 1934

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#### THE YEAR'S ACTIVITIES

In the ensuing chapters of this Annual Report there will be found detailed comment and statistics regarding the many phases of the operations of the Harbour of Montreal. These various paragraphs are devoted to shipping, grain, commodity tonnage, railway system, engineering, cold storage warehouse, etc. A study of the statistical tables will show that the season of navigation of 1934 was notable for:—

1. New high records in the number of ocean ship arrivals, in tonnage of imports and domestic commodities, and in receipts of coal and crude petroleum oil.
2. The development of an important movement of import foreign grain for forwarding to United States points.
3. A decrease in exports of Canadian and United States grain.
4. The carrying out of several items of construction work on the Harbour forming part of the programme of works authorized under the Public Works Construction Act, 1934.

5. Encouraging increases in the business of the Harbour railway system, and the Commissioners' cold storage warehouse.
6. An increase of 760,397 tons in total tonnage of all commodities which passed through the Port.

### **Financial.**

Income on revenue account in 1934 amounted to \$3,566,508.68, which was a decrease of \$307,936.75 from the previous year. This entire decrease was more than accounted for by the reduction in income from the grain elevator system, which was approximately \$312,000 less than in 1933. There were also decreases of \$40,265.47 in sundry receipts, and \$34,910.09 in revenue from rental of Harbour spaces. On the other hand, revenue from wharfage rates increased by \$45,884.85, and from railway traffic by \$26,926.62, while receipts from rental of sheds and from the Cold Storage Warehouse were also greater than in 1933.

Total operation, maintenance, repairs and general expense amounted to \$2,246,909.38, while interest on Government debentures was \$2,517,691.91.

Expenditure on capital account amounted to \$139,109.69, the lowest since 1898.

Revenues of the Harbour Commissioners of Montreal for the past five years have been as follows:—

1930.....	\$4,310,935.13
1931.....	4,500,457.59
1932.....	4,407,497.19
1933.....	3,874,445.43
1934.....	3,566,508.68

## Ships and Shipping Tonnage.

A new high figure for the Port was established in 1934 by the number of ocean vessels which arrived at Montreal. Both trans-Atlantic and inland shipping were slightly less than the 1933 figures, but coasting vessels almost doubled the previous year's total, with 819 ships, having net registered tonnage of 1,266,460 tons.

Two new services were inaugurated during the year, the Canada Indian Service (Ellerman Bucknall Line), and the Far East Line (Ocean Steamship Co.), for both of which McLean, Kennedy, Ltd. are Montreal agents.

Ocean passenger business to and from the Port of Montreal was practically the same as in 1933. There was a small decrease in the number of ocean passengers, and a slight increase in the number of coasting passengers. The river services of the Canada Steamship Lines, however, reported a substantial increase in the number of passengers carried on their vessels, viz.: 89,548 in 1934 as against 48,278 in 1933.

The number and net registered tonnage of ocean-going vessels (trans-Atlantic and coasting combined) which came to the Port of Montreal during the past five years were as follows:—

	Number	Net Regd.
	Tonnage	
1930.....	1,197	4,434,589
1931.....	1,150	4,069,421
1932.....	1,274	4,250,426
1933.....	1,476	4,546,678
1934.....	1,855	5,007,523

## Tonnage of Merchandise handled.

Total tonnage of merchandise which passed through the Port of Montreal in 1934 was 11,325,805 tons, which was an increase of 760,397 tons over 1933, and the largest

tonnage since the record year of 1928. Imports and domestic commodities both recorded substantial increases, and established new high figures for the Port. Exports decreased by almost half a million tons, which was more than accounted for by the decline in wheat shipments. In the past ten years, although the total has increased by more than two million tons, the proportion of the total represented by exports has dropped from 62% to 20%.

Commodities other than grain amounted in 1934 to 9,725,218 tons.

Imports amounted to more than 5,000,000 tons, for the first time in the Port's history, an increase of 548,765 tons over 1933. This makes the sixth successive year in which imports have increased. The largest single increase was accounted for by the development of the import movement of foreign grain. Other commodities represented in the total gain were petroleum oil, coal, iron ore, sugar, woodpulp, bananas, coke, flour and black plates.

Domestic merchandise recorded the largest increase, 684,994 tons, principally made up of coal, gasoline, fuel oil, lumber, crude oil, cement, lubricating oil and sand.

The following statement shows the yearly division and total tonnage of merchandise handled in the Harbour of Montreal during the past ten years:—

	Import tons	Export tons	Domestic tons	Total tons
1925....	2,394,311	5,265,151	1,477,819	9,137,281
1926....	2,028,162	4,549,835	2,632,702	9,210,699
1927....	2,693,535	6,175,485	3,052,153	11,921,173
1928....	2,543,685	6,838,108	3,207,333	12,589,126
1929....	3,256,991	3,418,896	3,260,985	9,936,872
1930....	3,376,182	3,101,561	3,210,026	9,687,769
1931....	3,568,542	3,036,835	3,308,997	9,914,374
1932....	4,036,045	3,926,315	2,782,978	10,745,338
1933....	4,539,444	2,802,873	3,223,091	10,565,408
1934....	5,088,209	2,329,511	3,908,085	11,325,805

HARBOUR COMMISSIONERS OF MONTREAL

FINANCIAL STATEMENT

The statement of Income and Expenditure for the year ended 31st December, 1934, exhibits the financial transactions of the Board for the period. The same, certified by the Acting Comptroller and the Secretary, and verified by the Auditors, follows:—

EXPOSITION OF APPENDICITIS

Harbour Dredging—				
Dredging of inner portion of the Harbour to same depth as Ship Channel	46,876.98			
Wharves & Piers—				
High Level Wharf, Birkenhead	1			
Fer.				
Reconstruction, North Wharf,				
Windmill Point Pier, Birkenhead	1,012.27			
Renovation of Railway No.	125.17			
High Level Wharf, Birkenhead	20,012.16			
High Level Wharves, Seaford	111.04			
Coal Dock, Section 56-61	2,111.41			
West Pier, Section 57-80	92.			
100. McCall's Frontage, Old				
High Level Wharf, Birkenhead	3,604.7			
Wharf, Section 104, Shell Oil				
Concourse 1 Lx. 18 ft. P. D. Pier-				
arm & Company	2,903.75			
High Level Wharf, Birkenhead	71,405.17			
High Level Wharf, Birkenhead				
Saltburn-by-the-Sea, Saltburn	1,151.69			
Two (2) 20-ft.-diam Locomotives				
each	16,136.98			
144.1, Ropewalks, 25' team				
16 ft. x 12 ft. x 12 ft. high	17,676.00			
end of 1st fl. 16 ft. x 12 ft.				
end of 2nd fl. 16 ft. x 12 ft.				
each	3,171.77			
Total Expenditure on Capital				12,000.00
Adjustments—				
Property, Pumping Avenue,				
1 ft. 10 in. x 1 ft. 10 in.	57,000.00			
1 ft. 10 in. x 1 ft. 10 in.	50,000.00			
Salaries, Wards				
Balances at 31st December 1934:				
Cash in Bank and on hand:	11,147.74			
Tax Refund	36,144.42			
Vis and Trav. etc.	2,01,302.54			
Less defected	\$12,206.72			
Vis and Trav. etc.	785.61			
each	91,403.55			
Stores, Aircraft				
Defered charges, suspense, etc.	179,522.95			
12 ft. x 7 ft.				
Total Balances at 1st Decem-	11,461.20			
ber 1934				
Total Balances at 31st Decem-	1,038.91			
ber, 1935	77			
Difference in balance, to add. .				

100

Certified  
J. H. A. ARCHAMBAULT



## Coal and Oil Receipts.

As has been customary for the past several years, receipts of coal and oil played a considerable part in the activities of the Port during 1934. Both commodities established new high records, with the result that their combined tonnage amounted to 5,607,913 tons, or practically 50% of the Port's entire tonnage of merchandise.

The picture presented by the ocean tramp situation to Montreal some years ago has now completely changed. Then the majority of tramps arrived at Montreal in ballast, to load outward cargoes of grain. During 1934, not only did the majority of tramp ships bring in coal and other bulk cargoes, and sailed from Montreal in ballast, but 34 tramps actually brought in cargoes of grain, which were unloaded at the grain elevators, and subsequently re-forwarded to United States destinations by lake vessel or railway car.

Total coal and coke receipts were 3,615,995 tons, an increase of 595,933 tons over 1933. Canadian bituminous increased by 515,092 tons to the highest total ever reached. British anthracite amounted to 1,325,689 tons, and British bituminous to 211,603 tons. Smaller quantities of German and Belgian anthracite are also included in the total.

Classifications of coal and coke receipts during 1934 were as follows:—

	tons
Canadian bituminous.....	1,919,839
British anthracite.....	1,325,689
British bituminous.....	211,603
German anthracite.....	65,053
U.S. anthracite.....	37,982
British coke.....	27,427
U.S. bituminous.....	16,164
Belgian anthracite.....	11,620
Canadian coke.....	618

UNUSUAL EFFECTS OF LIGHT & SHADE OUTSIDE SHED 24

Photo: Associated Screen News



Imports of oil and gasoline in 1934 were as follows:—

	tons
Crude oil.....	1,856,464
Gasoline.....	120,477
Refined oil.....	14,977

### **Grain Movement.**

The part of this Report devoted to the Grain Elevator System gives complete details of the grain movement through the elevators during 1934.

It is sufficient to mention here that deliveries of Canadian and United States grain from the elevators for export in the year under review reached the smallest total since 1911. Imports of foreign rye, corn, flax, barley and oats amounted to 11,238,354 bushels.

### **Railway Traffic.**

Railway traffic on the Harbour terminals made an encouraging gain during 1934, and throughout the year the indications were of consistently improving conditions in practically all branches of this traffic. The winter movement of rail traffic was particularly noteworthy, gains being made in coal and in interchange traffic. General foreign trade was better, and banana traffic increased by 250% over 1933. Notable gains were also made in cars of lumber for export, and in traffic to and from the Commissioners' Cold Storage Warehouse. Car-borne grain was the lowest on record.

### **Construction Activities.**

No development works of any consequence were undertaken during the season of 1934, the expenditure on capital account having been the smallest for the past thirty-six years. The most important work done was the dredging of the major part of the Harbour to the same depth as the Ship Channel.

The Commissioners' Chief Engineer was also entrusted by Order-in-Council with the design and supervision of those items of work authorized by the Public Works Construction Act, 1934, which had reference to the Harbour of Montreal. Contracts were awarded by the Government for all items except the paving item, which is being done departmentally by the Commissioners. The various items were:—

- 104—Repaving of certain Harbour surfaces.
- 105—Reconstruction of raceways at Windmill Point.
- 106—Certain protection works at Elevator No. 3.
- 107—Railway Track Embankment, Sections 101 to 110.
- 108—Raising of wharf, Sections 38, 39 and 40.
- 109—Painting of the structural work of Jacques Cartier Bridge.

### JACQUES CARTIER BRIDGE

On June 23, 1934, the Harbour Commissioners of Montreal adopted a resolution, respectfully recommending to His Excellency the Governor General in Council that the Montreal Harbour Bridge be officially named "Jacques Cartier Bridge", as a tribute to the courage and enterprise of the first white man to set foot on the ground on which the City of Montreal now stands.

This recommendation was approved by Order-in-Council No. P.C. 1358, on June 30th, 1934.

The Commissioners' engineering department, following authorization by Ottawa, was entrusted with the design of a monumental base to receive a bronze bust of Jacques Cartier, presented by the Government of France to Canada.

The official changing of the name of the Bridge to "Jacques Cartier Bridge", and the unveiling of the bronze bust of the famous explorer, and its acceptance by Canada, took place at a most colorful function held on the Bridge itself on September 1st, 1934.

The Bridge was suitably decorated for the occasion, and a great throng of the citizens of Montreal assembled to greet the official delegations from France, Great Britain and the United States, who had come to pay honour to the achievements of the intrepid adventurer from St. Malo. While great liners steamed proudly underneath, and airplanes circled overhead, those present on the historic occasion were reminded by one of the speakers that if the great navigator were present, he would look down in astonishment on the land which he had discovered. Where he had found virgin forests, inhabited by a few hundred roving Indians, he would see the great metropolis of more than a million inhabitants. Instead of his two tiny longboats anchored in the mighty river, he would see hundreds of great steamships, and the impressive structures of a modern sea-port.

The President and Commissioners received the guests, and after a short address, Mr. Newman announced that thenceforward the Bridge would bear the name of the discoverer of Canada, Jacques Cartier.

Mr. Henry Bordeaux in a felicitous speech, presented the bust to Canada, after which the unveiling of the bronze statue took place, with bands playing, the massed choirs singing, and a number of red, white and blue pigeons fluttering over the scene.

The Hon. Alfred Duranleau, Minister of Marine, accepted the gift on behalf of Canada, and thanked France for her thoughtful and generous gesture. "Canada accepts with a profound joy and an everlasting gratitude" concluded the Minister, "the gift of the French National Committee, which is to be added to so many other testimonies of the attachment of France to Canada."

The ceremony was attended by a distinguished gathering, in which were included His Excellency Pierre Etienne Flandin, Minister of Public Works in the Gov. of the French Republic (now Prime Minister of his country), Mrs. Flandin and Miss Flandin, Henry Bordeaux and Miss Bordeaux, the

Marquis de Créqui-Montfort and Miss Montfort, Hon. Alfred Duranleau and Mrs. Duranleau, His Grace Mgr. Deschamps, auxiliary Bishop of Montreal, Hon. Warren D. Robbins, United States Minister to Canada, Mr. René Turck, French Consul General in Canada, Admiral Cluverius of the United States Navy, Sir Roger Keyes, Admiral of the British Fleet, the Viscount de Roumefort, Rt. Hon. A. L. Fisher, official representative of Great Britain, the Duc de Lévis-Mirepoix, the Prince de Robeck, Rev. Olivier Maurault, Rector of the University of Montreal, the Count de Montcalm, Col. Jean Viljeux, Mayor of La Rochelle, and many others, including members of the Senate and Parliament of Canada, the Provincial Upper and Lower Houses, Consular representatives, Mayors, and distinguished citizens representing the manifold activities of the metropolis.

### STAFF CHANGES

On December 31, 1934, Mr. T. W. Harvie, M.Inst.C.E., M.E.I.C., P.E.Q., General Manager, and Capt. J. F. Symons, R.D., R.N.R., Harbour Master, relinquished their positions. Mr. Harvie had been in the service of the Commissioners for almost 25 years, having been appointed Assistant Engineer in May, 1910. He subsequently filled the positions of Assistant Chief Engineer, and Chief Engineer, and in March, 1924, was appointed General Manager.

In the quarter century during which Mr. Harvie was connected with the Port of Montreal, he has seen an extraordinary development in its business, and its growth from a third-class Harbour to its present imposing rank amongst the first ten great sea-ports of the world. During that time, construction programmes of great magnitude and vast importance were carried out, in the successful completion of which the retiring General Manager took an active part. In severing his active connection with an institution to which he has devoted much of his life, Mr. Harvie takes with him on his retirement, due to failing health, the warm

wishes of the Commissioners and staff for many years of happy and well-earned retirement.

In February, 1922, Capt. Symons was appointed Harbour Master, and on May 10th, 1924, was presented with the Reserve Decoration of the Royal Naval Reserve by Hon. E. M. Macdonald, then Minister of National Defence, on behalf of the Admiralty.

On February 12, 1935, the Commissioners issued the following announcement:—

"The Harbour Commissioners of Montreal officially announce that Capt. Joseph P. Dufour has been promoted from the position of Deputy Harbour Master of the Harbour of Montreal to that of Harbour Master; Capt. Rodney G. Perchard, Dockmaster, has been promoted to the position of Deputy Harbour Master; and Capt. Ewen Henry Cameron, master of the R.M.S. "Lady Somers", has been appointed Dockmaster."

## SHIPPING

The season of navigation in 1934 opened on March 29th, and closed on December 8th.

The Dominion Government Icebreaker "N. B. McLean" arrived at the Imperial Oil wharf at 11.05 a.m. on March 23rd, and reached Victoria Pier at 5.55 p.m. on March 28th. The Icebreaker "Lady Grey" entered the Lachine Canal at 10 a.m. on April 24th.

The first trans-Atlantic ship to reach Port in 1934 was the S.S. "Hadiotis", a Greek vessel with a cargo of linseed from South America, agents McLean Kennedy Ltd. Her master, Capt. E. Maniadis, was presented with the traditional engraved gold-headed cane by the Harbour Commissioners.

The number of ships which arrive at a port in the course of a year is, naturally, one of the primary indications of the importance of that Port in world trade. Particularly

is this true of Montreal, which, by reason of its geographical situation, is not, and never can be, a mere Port of call for vessels plying between two other ports. It is, therefore, a cause of considerable satisfaction to the Commissioners that the number of ocean ship arrivals in 1934 established a new high record, viz. 1,855 ships, of a total net registered tonnage of 5,007,523 tons.

The classification "Ocean Vessels" is divided into two groups, (a) Trans-Atlantic ships, and (b) Coasting ships. The number and tonnage of Trans-Atlantic ships was slightly less than in 1933, as the following table shows:—

	Trans- Atlantic Ships	Net Regd. Tonnage
1930.....	826	3,910,679
1931.....	811	3,425,107
1932.....	963	3,676,172
1933.....	1,061	3,822,586
1934.....	1,036	3,741,063

A remarkable increase, however, was recorded both in number and net registered tonnage of Coasting ships in 1934, the total being almost twice as great as that of the previous year, viz.:—

	Coasting Ships	Net Regd. Tonnage
1930.....	371	693,705
1931.....	339	644,314
1932.....	311	574,254
1933.....	415	724,092
1934.....	819	1,266,460

The combined total is a very creditable indication of increased activity on the St. Lawrence route, and an unfailing sign that world trade is commencing to recover from the doldrums in which it has been becalmed during the past four years.

Inland shipping is an important feature of the Port's activity, since it acts as a feeder to export trade, and as a carrier to inland destinations of a large proportion of import traffic. Due mainly to the decrease in the quantity of water-borne grain brought down from the Great Lakes for export, the number and tonnage of inland vessels decreased slightly in 1934 from the figure for the previous year, viz.:—

	Inland Ships	Net Regd. Tonnage
1930.....	4,255	3,975,946
1931.....	4,000	3,770,753
1932.....	4,094	3,755,442
1933.....	4,413	3,868,274
1934.....	3,702	3,305,503

The first river boat which arrived in Port was the "Rose Helene", on April 20th. The Lachine Canal was opened on April 26th, and closed on December 16th.

An event of considerable interest in shipping circles occurred during the year, when the Montreal services of the White Star Line were taken over by the Cunard Steamship Company, the vessels of both companies thenceforth being operated by Cunard-White Star Ltd.

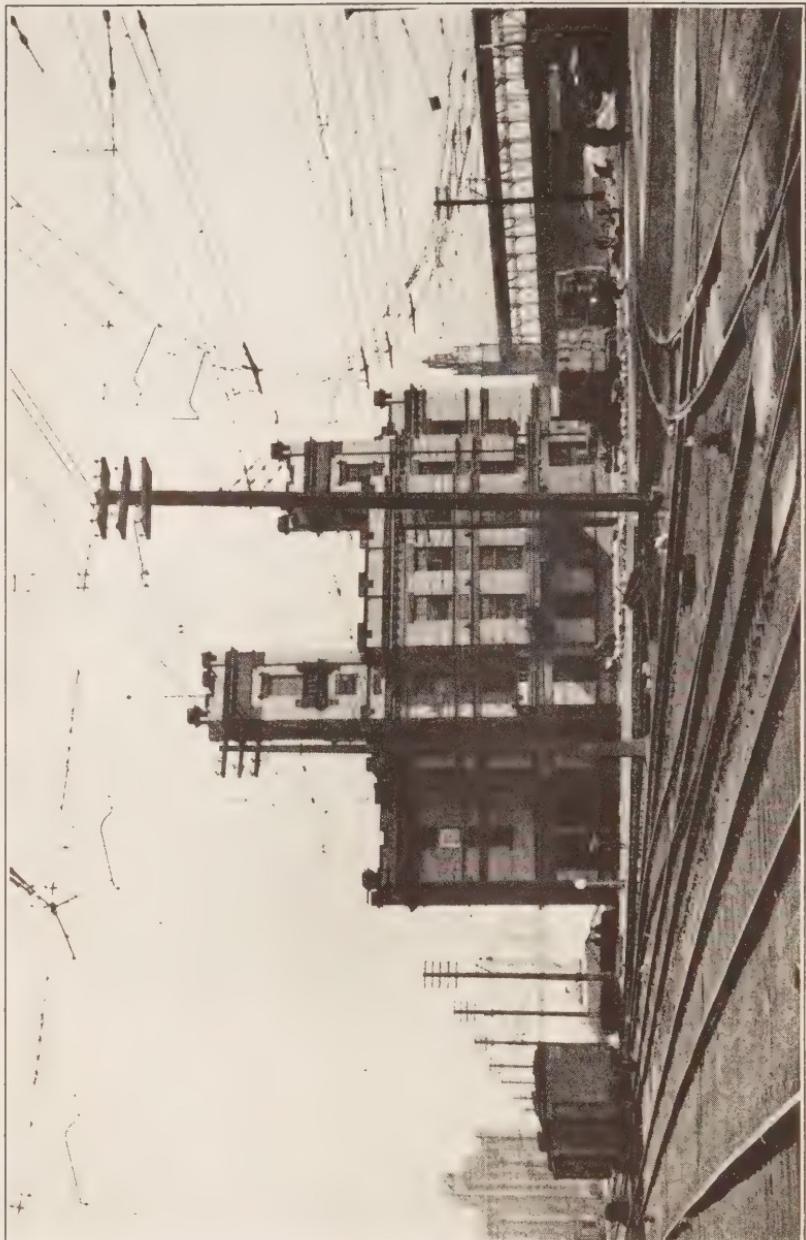
Two new services were inaugurated during the year, the Canada Indian Service, operated by Ellerman Bucknall Line, and the Far East Line, by the Ocean Steamship Co.

Other interesting features of the year's shipping activities were as follows:—

The import of foreign grain, which reached considerable proportions during the season, and which is referred to in more detail in the part of this Annual Report devoted to the Grain Elevator System, was reflected in the shipping movement during the year. In all, thirty-four vessels arrived in Port with full cargoes of foreign grain.

A NEW VIEW OF THE VICTORIA PIER OFFICE

Photo: Associated Screen News



A new fruit service from South Africa to Montreal was inaugurated during 1934, and resulted in large quantities of South African oranges and other fruits being stored in the Commissioners' Cold Storage Warehouse.

One of the largest consignments of automobiles ever shipped from Montreal to South Africa left Port during the season. Two cargoes of rubber reached the port from Dutch East Indies and Singapore. The S.S. "Kim", Russian Soviet ship, arrived from Leningrad with phosphate products, marking the first cargo of this nature from Russia for many years. The S.S. "Siren" brought in a cargo of salt from Gydnia, Poland. Nine U.S. coastguard cutters passed through to the Great Lakes on May 19th. Two tugs formerly owned by the Ford Motor Company, the "Baymead" and "Bathalum" sailed through the Lachine Canal and the St. Lawrence, bound for Russia, under the Soviet flag.

Three British warships, H.M.S. "Dragon", "Scarborough", and "Dundee", visited the Harbour during the season. The Canadian ships of war, H.M.C.S. "Champlain", and "Saguenay" also visited the Port in 1934, as well as the French warships "d'Entrecasteaux" and "Ville D'Ys", and the French training cruiser "Jeanne d'Arc".

Twenty-five tramp ships left the Port in ballast to load cargoes at Quebec, twenty at Sorel, and three at Churchill.

The following statement shows the classification of ocean-going vessels which arrived at Montreal during the navigation season of 1934:—

**Classification of Ocean Going Vessels which arrived  
at Montreal during the Season of 1934.**

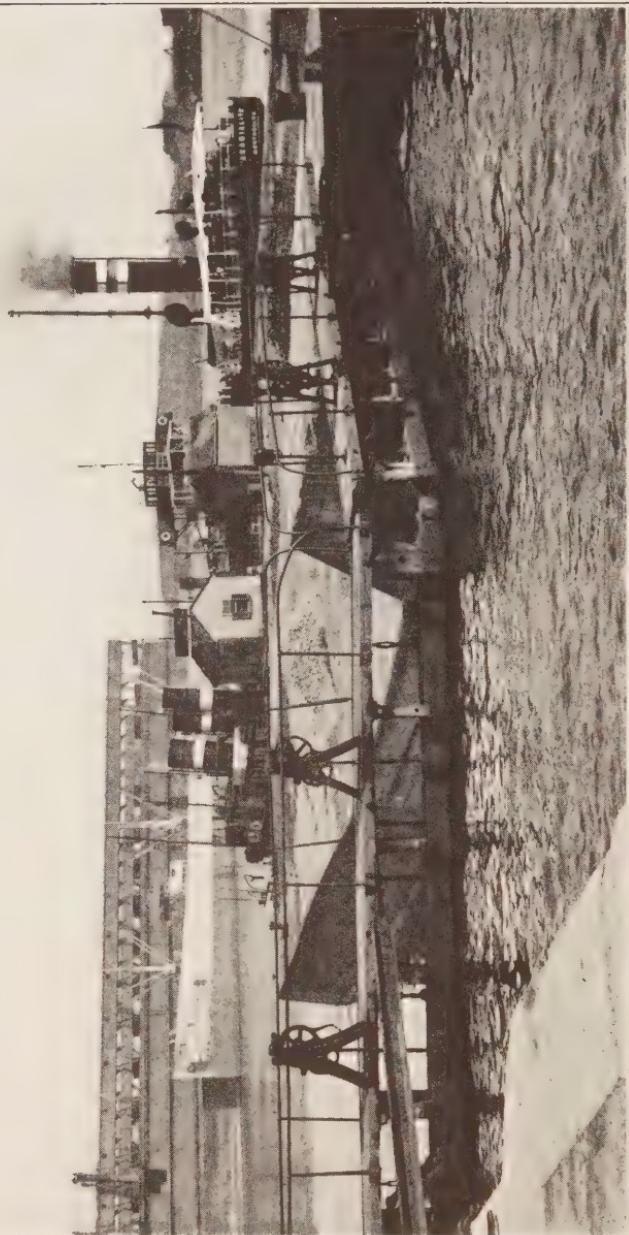
	Number of Vessels	Net Tonnage
British Passenger Liners.....	95	932,498
British Coasting—Coal.....	197	659,284
British Freight Liners.....	174	645,118
British Tramps—Coal.....	177	476,385
Canadian Coasting—Various.....	489	454,812
Foreign Tankers.....	82	338,901
Foreign Tramps—Various.....	150	226,085
Foreign Freight Liners.....	80	225,086
Canadian Tankers—Ocean.....	39	221,371
British Tankers—Ocean.....	42	187,415
Canadian Passenger Liners.....	24	107,709
Foreign Tramps—Coal.....	64	107,025
Canadian Freight Liners.....	34	99,588
Canadian Coasting—Passenger.....	61	71,269
Foreign Tramps—Grain.....	24	69,932
British Tramps—Various.....	13	33,254
British Tramps—Grain.....	9	26,555
Canadian Tankers—Coasting.....	13	26,316
British Tramps—Ballast.....	8	19,920
Foreign Coasting—Various.....	15	13,869
Canadian Coasting—Ballast.....	17	13,176
British Coasting—Gypsum.....	9	12,519
Foreign Tramps—Ballast.....	3	9,125
British Coasting—Various.....	7	4,804
Foreign Coasting—Ballast.....	4	4,740
British Coasting—Ballast.....	4	4,318
Foreign Warships.....	3	4,283
Canadian Tramp—Sugar.....	1	3,380
British Warships.....	3	3,192
Canadian Warships.....	3	2,301
Foreign Coastguards.....	9	1,940
British Tankers—Coasting.....	3	1,353
	1,855	5,007,523
British.....	741	3,006,615
Canadian.....	680	999,922
Foreign.....	434	1,000,986
	1,855	5,007,523

## Classification of Inward Cargoes—1934

Cargo	Number of Vessels	Net Registered Tonnage
General.....	551	1,964,369
Coal.....	529	1,371,055
Crude Oil.....	139	671,320
Pulpwood.....	277	317,309
Ballast.....	106	221,039
Woodpulp.....	44	55,661
Sugar.....	23	52,568
Rye.....	17	51,636
Crude Oil—Gasoline.....	8	40,040
Tinplate.....	8	27,971
Gasoline.....	11	26,648
Iron Ore.....	9	25,417
Crude Sulphur.....	8	23,549
Maize.....	6	18,085
Linseed.....	6	16,464
Gypsum.....	11	13,187
Gas Oil.....	2	9,635
China Clay.....	8	9,435
Manganese Ore.....	3	8,970
Salt.....	11	8,777
Barley.....	3	8,206
Molasses.....	3	7,824
Steel.....	6	7,361
Fuel Oil.....	2	5,891
Oats.....	2	5,245
Nitrate of Soda.....	4	4,932
Lumber.....	5	4,329
Car Ferry.....	1	3,385
Binder Twine.....	1	3,287
Potatoes.....	4	2,659
Phosphate Rock.....	1	2,398
Potash.....	1	2,327
Wood.....	21	1,880
Scrap Iron.....	2	1,796
Cotton-Rice.....	1	1,699
Ground Nut Oil.....	2	1,588
Lubricating Oil.....	1	1,549
Cottonseed Oil.....	2	1,391
Sulphite Pulp.....	2	1,331
Tugs.....	5	1,187
Oyster Shells—Resin.....	1	1,019
Fruit.....	1	848
Vegetable Oil.....	1	794
Sea Shells.....	1	736
Seal Oil.....	3	365
Cod Liver Oil.....	1	205
Fish.....	1	156
	1,855	5,007,523

A FRAGMENT OF THE PORT — LACHINE CANAL ENTRANCE GATES

Photo: Associated Screen News



### Classification of Outward Cargoes—1934

Cargo	Number of Vessels	Net Registered Tonnage
Ballast.....	966	2,454,216
Grain and General.....	309	1,629,735
General.....	353	527,991
Grain.....	64	172,925
Gasoline.....	12	43,254
Fuel Oil.....	7	24,987
Pitch.....	34	24,320
Cement.....	10	13,910
Tinplate I.T.....	3	10,721
Scrap Iron.....	2	8,391
Coal I.T.....	10	7,670
Flour and Feed.....	8	6,073
Salt I.T.....	3	4,927
Logs.....	2	4,724
Bunker Fuel Oil.....	1	4,411
Hay and Logs.....	1	4,119
Creosote.....	1	3,720
Scrap Iron.....	1	2,830
Crude Coal Tar.....	1	2,790
Sulphur I.T.....	1	1,970
Woodpulp I.T.....	1	1,768
Coal.....	1	1,152
Hay.....	1	987
Oats.....	1	840
Lumber.....	1	751
Linseed Oil Cake.....	1	722
Scrap Steel.....	1	671
Lard I.T.....	1	560
	1,806	4,971,287

**Classification of Vessels Arriving at the Port of  
Montreal during the Season of 1934**

<b>Passenger Liners</b>	<b>Number of Vessels</b>	<b>Net Tonnage</b>
Canadian Pacific.....	43	486,625
Cunard White Star Line.....	35	301,596
Anchor Donaldson Line.....	15	122,071
Canadian National.....	24	107,709
Clarke S.S. Co. (Coasting).....	47	55,043
White Star Line.....	2	22,206
Newfoundland-Canada S.S. Ltd.....	14	16,226
 <b>British Freight Liners</b>		
Canadian Pacific.....	31	186,330
Manchester Line.....	31	102,749
Anchor Donaldson Line.....	29	98,079
Elder Dempster Lines.....	17	63,773
Cairn Line.....	18	54,913
Head Line.....	16	52,476
Ellerman Wilson Line.....	10	26,099
Vancouver-St. Lawrence Line.....	8	24,684
Bristol City Line.....	9	15,053
Canada Indian Service.....	3	12,853
Far East Line.....	1	5,004
 <b>Canadian Freight Liners</b>		
Canadian National.....	34	99,588
 <b>Foreign Freight Liners</b>		
County Line.....	24	70,469
Lloyd Mediterraneo.....	17	57,874
Hamburg American-North German Lloyd.....	8	27,968
Norwegian American Line.....	10	26,256
Swedish America-Mexico Line.....	9	19,741
International Freighting.....	4	11,775
Scandinavian-American Line.....	7	9,073
Ocean Dom S.S.....	1	1,930
British Tankers — Ocean.....	42	187,415
Coasting.....	3	1,353
Canadian Tankers — Ocean.....	39	221,371
Coasting.....	13	26,316
Foreign Tankers — Norwegian.....	61	262,287
American.....	11	51,032
Dutch.....	5	19,579
German.....	5	6,003

			Number of Vessels	Net Tonnage
British Tramps	— Various	13	33,254	
	— Grain	9	26,555	
	— Ballast	8	19,920	
Canadian Tramps	— Various	1	3,380	
Foreign Tramps	— Grain			
	Norwegian	7	22,020	
	Swedish	4	11,753	
	German	4	11,732	
	Greek	4	10,975	
	Danish	3	7,200	
	French	2	6,252	
Foreign Tramps	— Various			
	Norwegian	94	115,835	
	Swedish	16	40,399	
	American	23	39,715	
	Danish	13	20,074	
	Italian	1	3,391	
	Russian	1	2,989	
	French	1	2,888	
	German	1	794	
British Tramps	— Coal	177	476,385	
Foreign Tramps	— Coal			
	Norwegian	40	52,188	
	Dutch	8	21,622	
	German	3	8,286	
	Swedish	4	7,849	
	Danish	4	7,540	
	Finnish	4	7,215	
	Latvian	1	2,325	
British Coasting	— Coal	197	659,284	
	— Gypsum	9	12,519	
	— Various	7	4,804	
	— Ballast	4	4,318	
Canadian Coasting	— Various	489	454,812	
	— Ballast	17	13,176	
Foreign Coasting	— Various			
	American	9	10,533	
	Norwegian	10	8,076	
Warships	— British	3	3,192	
	— French	3	4,283	
	— Canadian	2	2,301	
Coastguard Cutters	— American	9	1,940	
		1,855	5,007,523	

## PORT OF MONTREAL

Nationalities and Tonnage of Sea-Going Vessels that arrived at  
the Port of Montreal during the Season of 1934, which  
were navigated by 81,010 Seamen.

Nationality	Number of Vessels	Net Tonnage
British . . . . .	741	3,006,615
Canadian . . . . .	680	999,922
Norwegian . . . . .	251	569,640
American . . . . .	52	103,220
Swedish . . . . .	33	79,742
Danish . . . . .	27	43,887
German . . . . .	22	56,713
Italian . . . . .	18	61,265
Dutch . . . . .	13	41,201
French . . . . .	7	17,587
Greek . . . . .	4	10,975
Finnish . . . . .	4	7,215
Japanese . . . . .	1	4,227
Russian . . . . .	1	2,989
Latvian . . . . .	1	2,325
	1,855	5,007,523

**N.B.**—Of the above vessels 58 were built of wood with a net tonnage of 5,274.

**POR T OF MONTREAL**

Combined Statement showing the number and net tonnage of vessels that arrived at the  
Port of Montreal during the Past Ten Years

YEAR	TRANS-ATLANTIC		MARITIME PROVINCES AND NEWFOUNDLAND		INLAND		TOTAL	
	Vessels	Net Registered Tonnage	Vessels	Net Registered Tonnage	Vessels	Net Registered Tonnage	Vessels	Net Registered Tonnage
1925 . . . . .	1,040	4,744,793	215	359,520	5,957	4,957,224	7,212	10,061,637
1926 . . . . .	1,042	3,551,489	379	670,241	6,197	5,223,974	7,618	9,445,704
1927 . . . . .	1,231	4,252,325	379	740,161	6,188	5,664,942	7,798	10,657,428
1928 . . . . .	1,222	4,693,925	385	800,137	5,873	5,632,722	7,480	11,126,784
1929 . . . . .	916	3,910,679	367	727,121	5,085	4,368,317	6,368	9,006,117
1930 . . . . .	826	3,740,884	371	693,705	4,255	3,975,946	5,452	8,410,535
1931 . . . . .	811	3,425,107	339	644,314	4,000	3,770,753	5,150	7,840,174
1932 . . . . .	963	3,676,172	311	574,254	4,094	3,755,442	5,368	8,005,868
1933 . . . . .	1,061	3,822,586	415	724,092	4,413	3,868,274	5,889	8,414,952
1934 . . . . .	1,036	3,741,063	819	1,266,460	3,702	3,305,503	5,557	8,313,026

**PART OF MONTREAL**

**Statement showing the classification of Trans-Atlantic vessels that arrived at the Port of Montreal during the past ten years.**

Year	Steamships		Schooners		Total
	No.	Net Registered Tonnage	No.	Net Registered Tonnage	
1925.....	1,040	4,744,793	..	..	1,040
1926.....	1,042	3,551,489	..	..	4,744,793
1927.....	1,231	4,252,325	..	..	3,551,489
1928.....	1,222	4,693,925	..	..	4,252,325
1929.....	916	3,910,679	..	..	1,231
1930.....	826	3,740,884	..	..	1,222
1931.....	811	3,425,107	..	..	4,693,925
1932.....	963	3,676,172	..	..	3,910,679
1933.....	1,060	3,822,493	1	93	3,740,884
1934.....	1,855	5,007,523	..	..	3,425,107
					963
					1,061
					1,855
					3,676,172
					3,822,586
					5,007,523
					3,425,107
					963
					1,061
					1,855
					3,676,172
					3,822,586
					5,007,523

**PART OF MONTREAL**

Statement showing the classification of vessels that arrived in the Port of Montreal during the past  
ten years from lower St. Lawrence ports, the Maritime Provinces and Newfoundland.

Year	Steamships		Schooners		Total
	No.	Net Registered Tonnage	No.	Net Registered Tonnage	
1925	215	359,520	..	..	215
1926	379	670,241	..	..	279
1927	379	740,161	..	..	379
1928	385	800,137	..	..	385
1929	367	727,121	..	..	367
1930	371	693,705	..	..	371
1931	339	644,314	..	..	339
1932	311	573,954	..	..	311
1933	414	723,993	1	99	415
1934	819	1,266,460	..	..	819
					1,266,460

**PORT OF MONTREAL**

**Statement showing the dates of the Opening of Navigation and the Closing thereof, the First Arrival and the Last Departure for Sea; also the greatest Number of Vessels in the Port at one time, during the past ten years.**

Year	Opening of Navigation	Closing of Navigation	First Arrival from Sea	Last Departure for Sea	Greatest number of Vessels in Port at one time.		
					No.	Date	Inland
1925.....	April 10th	Dec. 10th	April 16th	Dec. 8th	62	Aug. 19th	46
1926.....	May 2nd	Dec. 6th	May 3rd	Dec. 6th	60	May 19th	66
1927.....	April 10th	Jan. 4/28	April 12th	Dec. 6th	80	Oct. 20th	44
1928.....	April 26th	Jan. 6/29	April 26th	Dec. 9th	61	Nov. 19th	43
1929.....	April 10th	Dec. 10th	April 20th	Dec. 7th	53	July 3rd	47
1930.....	April 12th	Dec. 12th	April 21st	Dec. 12th	50	May 14th	41
1931.....	Mar. 19th	Dec. 13th	April 15th	Dec. 11th	53	May 27th	29
1932.....	April 14th	Dec. 13th	April 18th	Dec. 7th	53	Nov. 23rd	49
1933.....	Mar. 23rd	Dec. 14th	April 14th	Dec. 6th	40	Nov. 1st	34
1934.....	Mar. 28th	Dec. 8th	April 26th	Dec. 8th	42	Nov. 5th	33

## GRAIN ELEVATOR SYSTEM

In giving an account of the activities of the Harbour Commissioners' grain elevator system it is no longer sufficient to state that a specific quantity of grain was delivered during the year, most of which was for export overseas, with the usual smaller quantity for local consumption.

Recent developments in the movement of grain through the Port have made it necessary to distinguish between deliveries from the elevators for export, and deliveries of foreign import grain for forwarding to United States interior points.

Deliveries of Canadian and United States grain to ocean vessels for export dropped to a very low figure in 1934. In fact, they reached the smallest total since 1911. Practically no United States grain was exported through Montreal in the year under review, and while exports of Canadian oats and barley increased somewhat over the previous year, the shipments of Canadian wheat suffered a considerable decrease.

The following shows deliveries of Canadian and United States grain from the four elevators during 1934:—

Canadian wheat.....	36,120,958	bushels
"    oats.....	4,018,052	"
"    barley.....	3,720,262	"
"    rye.....	222,467	"
"    flax.....	177,553	"
"    buckwheat.....	169,886	"
"    corn.....	2,811	"
United States wheat.....	187,550	"

The import of foreign grain through Montreal was confined, for several years past, to small quantities of Argentine corn. In 1933, shortly after the repeal of Prohibition in the United States, a few cargoes of rye were brought in from Roumania, Rotterdam and Danzig, for

## HANDLING TIMBER AT SECTION 12

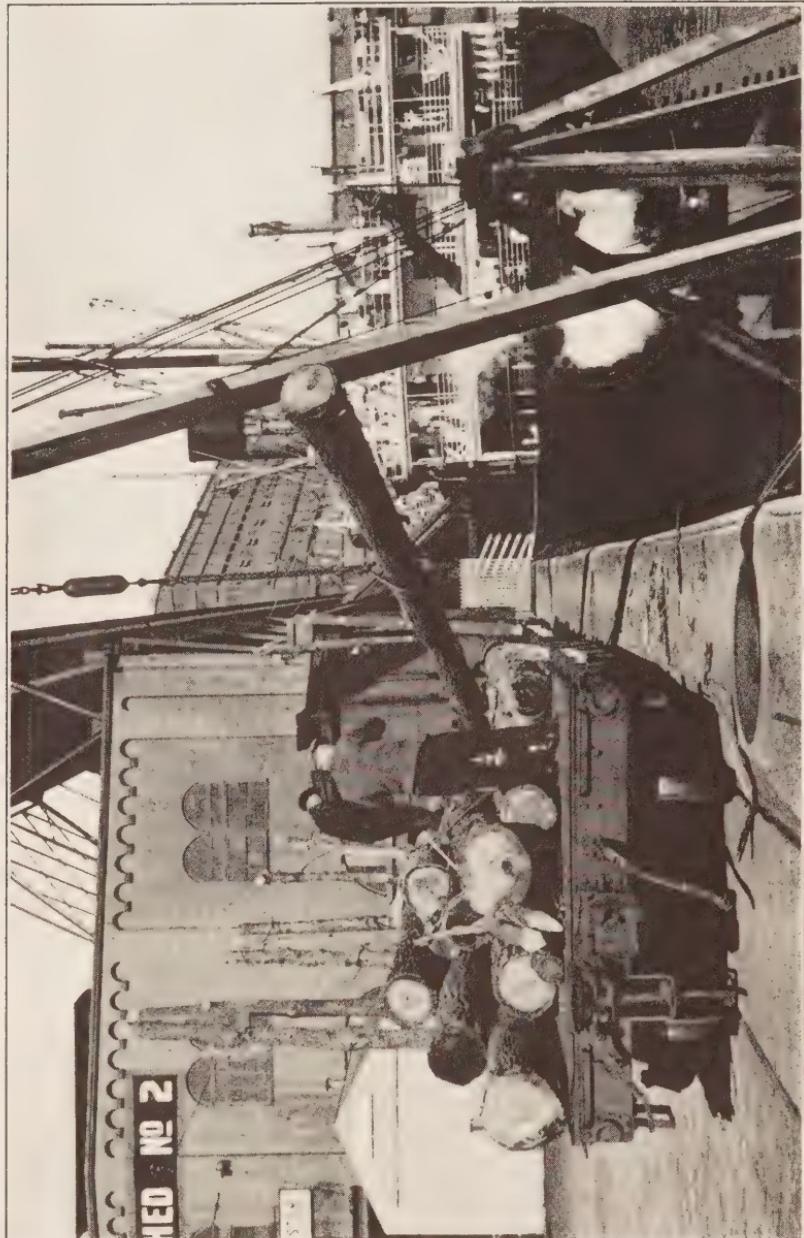


Photo: Associated Screen News

forwarding to the United States. In 1934, however, this inward movement of grain through the Port reached considerable proportions, as may be seen from the following table, which gives receipts of foreign grain:—

	bushels
Polish rye.....	4,542,554
South African corn.....	1,472,738
Argentine flax.....	1,408,203
Polish barley.....	1,232,479
Argentine oats.....	798,178
Latvian rye.....	562,083
Russian rye.....	560,832
Argentine corn.....	373,557
Indian flax.....	287,730
<hr/>	
	11,238,354

Total deliveries from the elevators in 1934 amounted to 56,374,541 bushels, divided as follows between the four elevators:—

	bushels
Grain Elevator No. 1.....	16,047,210
Grain Elevator No. 2.....	18,548,997
Grain Elevator No. 3.....	12,546,773
Grain Elevator "B".....	9,231,561
<hr/>	
	56,374,541

Deliveries by months during the navigation season were as follows:—

	bushels
May.....	9,317,542
June.....	7,579,620
July.....	5,241,924
August.....	6,558,156
Sept.....	4,856,648
Oct.....	8,215,998
Nov.....	10,345,006

**SUMMARY OF GRAIN HANDLING, ELEVATORS 1, 2, 3 & "B",  
1934**

Month	C. N. Cars	C. P. Cars	Total Cars	Ves- sels	Receipts bushels	Deliveries bushels
January.....	2	3	5	....	8,083	606,061
February.....	1	9	10	....	14,704	1,024,588
March.....	4	4	8	....	11,109	845,266
April.....	2	6	8	1	301,505	767,125
May.....	588	384	972	108	12,036,123	9,317,542
June.....	84	13	97	57	6,037,925	7,579,620
July.....	24	32	56	83	7,123,478	5,241,924
August.....	24	64	88	79	6,162,777	6,558,156
September.....	31	11	42	88	6,704,887	4,856,648
October.....	97	59	156	110	11,443,144	8,215,998
November.....	105	20	125	85	8,102,897	10,345,006
December.....	3	6	9	12	803,302	1,016,607
Total.....	965	611	1,576	623	58,749,934	56,374,541

## SUMMARY OF GRAIN HANDLING

### Elevators 1-2-3-B, 1934

	Receipts bushels	Deliveries bushels
January.....	8,083	606,061
February.....	14,704	1,024,588
March.....	11,109	845,266
April.....	301,505	767,125
May.....	12,036,123	9,317,542
June.....	6,037,925	7,579,620
July.....	7,123,478	5,241,924
August.....	6,163,777	6,558,156
September.....	6,704,887	4,856,648
October.....	11,443,144	8,215,998
November.....	8,102,897	10,345,006
December.....	803,302	1,016,607
	<hr/>	<hr/>
	58,749,934	56,374,541

	Receipts bushels	Deliveries bushels
Water.....	55,677,668	Steamers export..
		39,392,098
		Steamers other...
Rail.....	2,854,878	10,448,009
		Cars export.....
		332,233
Trucks.....	217,388	Cars other.....
		4,050,865
		Waggons export..
		23,565
		Waggons other...
		2,127,771
	<hr/>	<hr/>
	58,749,934	56,374,541

First Vessel Unloaded—April 27th, 1934

Last Vessel Unloaded—December 17th, 1934

	bushels
623 Vessels.....	55,677,668
965 C.N. cars }	2,854,878
611 C.P. cars }	1,576 cars.....
1,190 trucks.....	217,388
	<hr/>
Stock in Elevators (at December 31st, 1934).....	58,749,934
	9,257,895

## SUMMARY OF GRAIN RECEIPTS, ELEVATORS 1, 2, 3 AND "B", 1934

Month	Wheat	Oats	Barley	Corn	Rye	Flax	Buckwheat	Total
January.....	5,595	3,012	.....	.....	.....	.....	.....	8,083
February.....	10,440	3,242	.....	979	.....	.....	1,252	14,704
March.....	5,759	3,660	.....	.....	.....	.....	1,129	11,109
April.....	8,438	1,739,121	266,353	25,000	869,653	632,265	7,499	301,505
May.....	8,496,232	441,737	234,255	.....	1,767,101	.....	8,833	12,036,123
June.....	3,585,999	439,012	702,506	.....	307,929	29,968	3,617	6,037,925
July.....	5,640,386	926,292	873	.....	.....	.....	7,123,478	7,123,478
August.....	4,719,161	516,410	930,131	1,108,687	116,077	.....	41	6,162,777
September.....	5,078,762	576,733	1,468,660	1,947,756	515,045	186,945	3,184	6,704,887
October.....	6,043,493	172,558	1,214,631	709,735	656,953	346,960	11,628	11,443,144
November.....	4,276,579	886,411	85,171	5,319	.....	59,841	.....	8,102,897
December.....	652,971	.....	.....	.....	.....	.....	803,302	803,302
Total.....	38,523,815	4,867,067	5,742,888	1,850,593	5,665,469	1,873,486	226,616	58,749,934

## SUMMARY OF GRAIN DELIVERIES, ELEVATORS 1, 2, 3 AND "B", 1934

Month	Wheat	Oats	Barley	Corn	Rye	Flax	Buckwheat	Total
January.....	309,752	126,603	53,888	107,380	5,950	.....	.....	606,061
February.....	682,157	176,091	71,879	91,409	2,500	.....	552	1,024,588
March.....	544,610	119,000	94,218	87,438	.....	.....	.....	845,266
April.....	336,765	69,432	56,226	206,502	500	97,000	.....	767,125
May.....	6,943,409	617,076	94,617	301,061	847,018	513,276	1,085	9,317,542
June.....	5,104,855	414,249	126,065	122,914	1,714,342	83,551	13,044	7,579,620
July.....	3,584,397	654,473	307,256	72,613	427,396	189,968	5,821	5,241,924
August.....	5,063,443	532,192	826,445	101,195	34,786	.....	95	6,558,156
September.....	3,625,526	500,857	517,674	40,813	102,900	67,845	1,033	4,856,648
October.....	3,820,712	291,569	1,196,228	376,523	2,026,834	434,337	69,795	8,215,998
November.....	5,599,725	1,277,236	1,556,558	739,605	710,710	427,668	33,504	10,345,006
December.....	693,157	37,452	51,087	118,301	15,000	59,841	41,769	1,016,607
Total.....	36,308,508	4,816,230	4,952,741	2,365,754	5,887,936	1,873,486	169,886	56,374,541

## STATEMENT SHOWING DESTINATION OF EXPORT GRAIN, 1934

(Bulk Grain Deliveries Direct to Vessel)

(Bushels)

COUNTRY	WHEAT	OATS	BARLEY	RYE	CORN	BUCK-WHEAT	TOTAL
Algeria.....	167,200	.....	.....	.....	.....	.....	167,200
Belgium.....	4,117,562	9,412	80,000	.....	.....	20,000	4,226,974
Denmark.....	949,003	.....	.....	21,427	.....	.....	970,430
Finland.....	56,000	.....	.....	.....	.....	.....	56,000
France.....	2,790,977	.....	.....	.....	.....	.....	2,790,977
Germany.....	1,021,600	.....	50,000	.....	.....	.....	1,071,600
Great Britain.....	13,475,665	2,616,195	2,116,714	94,282	51,000	.....	18,353,856
Holland.....	3,103,615	18,824	615,424	.....	.....	92,146	3,830,009
Irish Free State.....	1,330,374	.....	.....	.....	.....	.....	1,330,374
Ireland, Northern.....	320,000	37,647	141,667	.....	.....	.....	499,314
Italy.....	1,057,223	.....	.....	.....	.....	.....	1,057,223
Norway.....	1,451,306	.....	.....	.....	.....	.....	1,451,306
Sweden.....	333,914	.....	.....	.....	.....	.....	333,914
Unknown.....	3,116,952	18,823	50,000	.....	.....	.....	3,185,775
Total.....	33,291,391	2,700,901	3,053,805	115,709	51,000	112,146	39,324,952

## HARBOUR RAILWAY TERMINALS

A striking increase in the movement of rail traffic was experienced during the winter months. The gain was made particularly in shipments from coal plants on the Harbour, and in the movement of interchange traffic, comprising for the greater part shipments of fuel oil, and probably reflects the severity of weather during the winter of 1933-34 rather than an improvement in trade conditions.

The increase in revenue car handling amounted to more than 20% as compared with last year. The season of navigation was undeniably one of improving conditions.

From May to September the movement of rail traffic was constantly in excess of the same months in the previous year. Both September and November, however, showed slight decreases as compared with 1933, but in neither case was there any indication that the betterment in traffic conditions had come to a standstill. The September returns were lower only by the loss of one working day, and the November falling-off was influenced entirely by the shortening of the season, although the prevailing weather conditions would easily have permitted the usual late November regular sailings.

Throughout the season, many noteworthy signs of improvement were indicated, foremost amongst which was the revival of rail-borne lumber for export, which reached proportions greater than for many years.

General foreign trade through the Port had all the ear-marks of a permanent upward trend, judging by the number of cars handled at the transit sheds, which was considerably greater than in 1933 and 1932. The banana traffic, which had slumped badly in 1933, showed marked improvement, the handling from this source having reached nearly 1,700 cars, or an increase of 250% over last year.

There was also a considerable increase in the rail shipments of import and domestic coal, and rail traffic to and from the Commissioners' Cold Storage Warehouse was measurably greater than last year.

Cattle traffic suffered a decline of about 170 cars, or 10%, in comparison with last year, and unfortunately no improvement was noted in car grain through the Port, the figures being practically the same as last year, which had been the lowest on record.

Local and industrial rail traffic originating or terminating on the Harbour tracks made no appreciable gain, but interchange traffic using Harbour rails as a connecting link, increased by 25% as compared with the preceding years.

The year as a whole clearly reflected more healthy trade conditions, and while the increase in car handling was only 8% above 1933, it is interesting to observe that when compared with the accepted base year of 1926, the movement of revenue traffic at the Port was maintained at 75% of that base as against 68.7% for general rail traffic at large, unmistakably a sign of the importance of the Port's railway facilities.

Improved traffic conditions permitted more extensive use of the electric locomotives, which were operated during 6,465 hours, covering in that time nearly 20,000 miles.

During the year total car handling amounted to 163,154 cars, an increase of 12,827 cars over last year.

The following table gives the mileage of Harbour railway tracks, with the number of cars handled during the past ten years:—

	Mileage of Harbour Railway	Number of cars handled
1925.....	63.55	251,586
1926.....	65.19	205,481
1927.....	67.44	195,853
1928.....	67.99	240,622
1929.....	68.42	242,967
1930.....	69.28	205,082
1931.....	69.60	185,155
1932.....	69.55	164,060
1933.....	69.82	150,327
1934.....	69.52	163,154

## COLD STORAGE WAREHOUSE

The general and cold storage warehouse operated by the Harbour Commissioners as a useful and important adjunct to the Port facilities was busier during the latter half of 1934 than for several years past. The months of September and October, in particular, were productive of an increase in business sufficiently great to offset losses sustained in the first six months of the year. During these two months receipts at the warehouse amounted to 9,766 tons, and deliveries to 5,952 tons. The total year's business recorded an encouraging increase over 1933.

The business of the warehouse may be divided roughly into two classifications, viz. merchandise received and shipped by railway cars, and merchandise received and shipped by trucks or teams. A large increase was noted in the number of cars of freight shipped to the plant for storage, and in the number of cars loaded for export and outward shipments. This increase was all the more noteworthy in view of the fact that the blueberry crop, which accounted for 44 cars in 1933, was a total failure in 1934, while 61 fewer cars of celery were received as compared with the previous year, due to crop damage. The following increases in cars of various commodities received were noted:—Apples, increased by 171 cars, potatoes by 26 cars, eggs and pears by 18 cars each, green peas by 10 cars, plums and nuts by 7 cars each, butter by 5 cars, onions by 4 cars, and poultry and peaches by 3 cars each. Of the large surplus of cars of apples received in 1934, the majority came from British Columbia, which was gratifying, inasmuch as apple crops in both Quebec and Ontario were approximately 45 to 50 per cent of the 1933 crops.

Approximately 32,000 tons of merchandise were handled in and out by trucks and teams in 1934.

An interesting feature of the year's business was the storage of approximately 80,000 boxes of South African

oranges, which were imported by steamship and trucked to the warehouse.

The trend of business at this plant has undergone considerable changes in the past five years. For example, in 1929, cheese represented 45% of the entire year's business, while in 1934 it only amounted to 12½%. Butter and hops have also fallen off considerably in recent years. Losses in these commodities have been compensated for, however, by increases in other varieties of perishable goods, notably apples, eggs, fruits, meat, nuts and dry goods.

### HARBOUR POLICE DEPARTMENT

The Harbour Commissioners maintain their own police department, consisting of a chief, three captains and forty-four constables during the season of navigation. During the winter season twenty-seven men are retained on duty being laid off one day each week so as to enable the remaining men to work two days each week during the closed season.

This efficient force performs the usual police duties, maintaining day and night patrol along the entire length of the Harbour front, and on the Jacques Cartier Bridge, enforcing traffic regulations, keeping order, and safeguarding life and property. Close co-operation exists between the Harbour Commissioners' police force and the City and Provincial Police Departments.

During the year 21 arrests were made for various offences, exclusive of traffic violations. One hundred and sixty-seven cases of accident or sudden illness were given first aid by the police department.

Carters to the number of 5,687, loading and delivering merchandise at various points along the Harbour front, were checked by the traffic constables. Taxis to the number of 4,506 were checked on the arrival and departure of passenger vessels.

The police car and motorcycles covered 35,696 miles during the year.

## COMMODITY TONNAGE STATEMENT

The combined tonnage of import, export and domestic merchandise which passed through the Port of Montreal in 1934 was 11,325,805 tons.

This total represents an increase of 760,397 tons over the figure for 1933. Imports increased by 548,765 tons, and domestic tonnage increased by 684,994 tons. Both imports and domestic merchandise established new high records for the Port. Exports decreased by 473,362 tons to the lowest figure recorded in many years.

The decrease in tonnage of exports was more than accounted for by the decline in outward shipments of wheat and flour, which were as follows:

Wheat, decreased by.....	611,682 tons
Flour, decreased by.....	60,277 tons
<hr/>	
	671,959 tons

Exports of coarse grains, barley and oats, were considerably greater than in 1933, having increased by almost 80,000 tons. Shipments of automobiles and parts were greater by more than 58,000 tons, and of copper, in various forms, by more than 51,000 tons. It is of interest to note that due to continuous declines in tonnage of exports, combined with recent heavy and consistent increases in tonnages of imports and domestic merchandise, the proportion of total tonnage represented by exports has undergone a remarkable change in the past ten years. Thus in 1924, exports represented 62% of the total tonnage of the Port, and in 1928, when the maximum tonnage of 12,589,126 tons was handled, exports represented 54% of the total. A marked contrast is revealed in the figures for 1934, when exports only amounted to 20% of the total.

Again, as in 1932 and 1933, the most outstanding feature of the merchandise movement through the Port was the

import of bulk cargo commodities. Coal and oil receipts again established new high figures of 3,615,995 tons and 1,991,918 tons respectively. A somewhat unexpected new development was the import of foreign grain in considerable quantities, destined to United States points. This commodity reached a total of 300,151 tons.

Coal tonnage inward included 1,921,139 tons of Nova Scotia bituminous, which was also a new high record, and which is included in the Domestic Commodity statement. Import tonnage has increased for six successive years, as is shown by the following table:

Imports	
1928.....	2,543,685 tons
1929.....	3,256,991 tons
1930.....	3,376,182 tons
1931.....	3,568,542 tons
1932.....	4,036,045 tons
1933.....	4,539,444 tons
1934.....	5,088,209 tons

Domestic commodity tonnage in 1934 also reached the highest total in the history of the Port, viz. 3,908,085 tons. Contributing to this were increases in quantities of bituminous coal, gasoline, fuel oil, lumber, crude oil, cement, lubricating oil, etc.

The following comparative statement shows the division of tonnage of merchandise for the past three years:

	1932	1933	1934
	tons	tons	tons
Imports.....	4,036,045	4,539,444	5,088,209
Exports.....	3,926,315	2,802,873	2,329,511
Domestic.....	2,782,978	3,223,091	3,908,085
	<hr/> 10,745,338	<hr/> 10,565,408	<hr/> 11,325,805



### UNLOADING FLOUR

Photo: Associated Screen News

The most notable increases in Imports were: petroleum oil (149,591 tons), rye in bulk (114,220 tons), anthracite coal (95,138 tons), iron ore (43,240 tons), barley in bulk (29,579 tons), raw sugar (25,835 tons), woodpulp (21,270 tons), raw fruit, bananas, etc. (19,589 tons), gasoline (19,546 tons), flax in bulk (15,723 tons), coke (15,369 tons), oats in bulk (13,416 tons), flour (8,651 tons), black plates (7,930 tons), muriate of potash (7,492 tons), and smaller increases in crude rubber, china clay, fire brick, nitrate of soda, black sheets and glassware. Decreases were noted in sulphur (17,552 tons), manganese ore (15,173 tons), molasses (12,068 tons), binder twine (5,094 tons), corn in bulk (4,804 tons), as well as smaller decreases in bituminous coal from overseas, tea, wool, sand, yarns, toys and cocoa beans.

Despite the large drop in export tonnage, many export commodities showed increases, of which the most important were: automobiles and parts (58,247 tons), barley in bulk (57,269 tons), copper rods, ingots, cathodes, matte and cakes (51,577 tons), lumber (27,618 tons), oats in bulk (22,331 tons), paper (17,816 tons), petroleum oil (17,142 tons), pulpboard (7,323 tons). There were smaller increases in exports of lard, meats, cement, soup in tins, fruit in tins, and canned goods. In addition to the decreases in wheat and flour, referred to above, there were also decreases in raw fruit (20,559 tons), iron and steel scrap (7,306 tons), cheese (7,265 tons), woodpulp (5,939 tons), bran (4,286 tons), and also in liquors, pitch, catsup, buckwheat, cereals, cattle and spelter.

Increases in domestic commodities were as follows: bituminous coal (516,021 tons), gasoline (68,466 tons), fuel oil (44,884 tons), lumber (40,694 tons), crude oil (34,863 tons), cement (20,369 tons), lubricating oil (18,679 tons), sand (18,169 tons), and also in refined sugar, gypsum and potatoes. Decreases were as follows: grain for local delivery (73,627 tons), anthracite coal (21,518 tons), firewood (20,381 tons), coal oil (11,898 tons), and molasses (6,436 tons).

The following are the quantities of the more important commodities included in the Domestic Tonnage list:—

	tons
Bituminous coal.....	1,921,139
Gasoline.....	485,429
Fuel oil.....	346,448
Crude oil.....	337,975
Grain for local delivery.....	165,345
Lumber.....	72,149
Lubricating oil.....	67,344
Cement.....	62,249
Refined sugar.....	55,361
Sand.....	35,326
Anthracite coal.....	28,958
Flour.....	24,118
Hay.....	22,521
Gypsum.....	21,942
Coal oil.....	20,725
Iron and steel.....	20,293
Molasses.....	15,672
Creosote oil.....	14,911
Potatoes.....	11,999

The relative importance of the movement of the principal import and export commodities can be gauged from the following comparative lists:—

### PRINCIPAL IMPORTS

	tons
Oil, crude petroleum.....	1,821,888
Anthracite coal.....	1,416,787
Raw sugar.....	230,136
Bituminous coal.....	226,823
Woodpulp.....	208,229
Rye in bulk.....	158,633
Gasoline.....	80,377
Iron ore.....	72,753
Tin plates.....	52,573
Corn in bulk.....	50,915
Raw fruit (bananas, etc.).....	50,346
Flax in bulk.....	47,486
Iron and steel sheets, bars, plates, etc.....	41,268
Barley in bulk.....	29,579
Manganese ore.....	29,286
Sulphur.....	27,942
Salt.....	27,456
Molasses.....	27,452
Coke.....	27,427
Dry goods.....	24,621
Dried fruit.....	15,563
Glass sheets.....	14,455
Oats in bulk.....	13,416
Muriate of potash.....	13,255
China clay.....	10,106
Black sheets.....	9,824
Toys.....	9,516
Fire brick.....	9,227
Flour.....	9,072

	tons
Black plates.....	7,930
Glassware.....	7,566
Sand.....	6,945
Yarns.....	6,718
Earthenware.....	6,709
Whiting.....	6,483
Tea.....	6,264
Unhulled rice.....	6,205
Refined sugar.....	6,201
Cocoa beans.....	6,182
Phosphate rock.....	6,162
Raw vegetables.....	5,985
Binder twine.....	5,772
Nitrate of soda.....	5,583
Coconuts.....	5,542
Wool.....	5,542
Liquors.....	5,380
Machinery.....	5,000
Paper.....	4,971
Coffee.....	4,778
Crude rubber.....	4,684
Wines.....	4,517
Lithopone.....	4,306
Copper matte.....	4,379
Malt.....	4,236
Linseed oil.....	4,185
Raw cotton.....	4,148
Jute cloth.....	4,024
Nuts (edible).....	3,679
Meat in tins.....	3,492
Canada plate.....	3,401
Galvanized sheets.....	3,389
Fish, cured and in tins.....	3,380
Fruit in tins.....	3,146

## PRINCIPAL EXPORTS

	tons
Wheat in bulk . . . . .	998,743
Flour . . . . .	202,222
Automobiles and parts . . . . .	116,945
Barley in bulk . . . . .	73,291
Lard . . . . .	61,620
Copper rods . . . . .	57,623
Paper . . . . .	52,911
Raw fruit . . . . .	50,927
Cured meats . . . . .	50,251
Lumber . . . . .	48,540
Oats in bulk . . . . .	45,915
Fuel oil . . . . .	30,574
Woodpulp . . . . .	28,166
Cheese . . . . .	27,176
Copper matte . . . . .	26,861
Hay . . . . .	25,263
Cereals . . . . .	20,568
Rubber manufactures . . . . .	18,173
Cattle . . . . .	16,003
Pulpboard . . . . .	15,662
Iron and steel scrap . . . . .	13,768
Copper cathodes . . . . .	12,661
Cement . . . . .	11,013
Spelter . . . . .	10,248
Soup in tins . . . . .	9,954
Ship Stores . . . . .	9,696
Fresh or frozen meats . . . . .	9,652
Tar . . . . .	9,074
Milk in tins, powdered, etc . . . . .	7,996
Rolled oats . . . . .	7,600
Canned goods, n.o.s . . . . .	7,344
Oats in bags . . . . .	7,151
Fruit in tins . . . . .	7,052
Agricultural implements . . . . .	6,853
Catsup . . . . .	6,724
Steel wire in coils . . . . .	6,515
Bran . . . . .	5,945
Copper ingots . . . . .	5,881
Acetic Acid . . . . .	5,720
Oilcake meal . . . . .	5,574

Animal food.....	4,704
Fish, cured, in tins, etc.....	4,687
Asbestos.....	4,490
Wallboard.....	4,452
Meats in tins.....	4,351
Toys.....	4,307
Hardwood flooring.....	4,073
Binder twine.....	3,763
Wheat in bags.....	3,552
Dry goods.....	3,317
Fibreboard.....	3,266
Rye in bulk.....	3,240
Shooks.....	3,225
Vegetables in tins.....	3,211
Eggs.....	2,914
Electrodes.....	2,833
Stoves.....	2,817
Toilet soap.....	2,750
Buckwheat in bulk.....	2,692
Copper cakes.....	2,526
Washing machines.....	2,459
Machinery.....	2,330
Iron and steel piping.....	2,320
Nails.....	2,175
Electrical apparatus.....	2,162
Garden bulbs.....	2,152
Empty barrels and drums.....	2,122
Macaroni.....	2,103
Settlers' effects.....	2,045
Leather manufactures.....	2,025
Shorts.....	1,940
Hair.....	1,824
Trucks.....	1,804
Sausage casings.....	1,727
Tomato juice.....	1,705
Cyanide.....	1,688
Woodenware.....	1,656
Furniture.....	1,617
Gasoline in bulk.....	1,571
Beans.....	1,542
Leather scrap.....	1,521

## IMPORTS 1934

COMMODITY	Total Tons	Distribution after Import		
		Rail Tons	Vessel Tons	Other Tons
Acid, Boric . . . . .	12	—	12	—
Acid, Carbolic . . . . .	21	—	—	21
Acid, Citric . . . . .	168	2	40	126
Acid, Cresylic. . . . .	48	1	47	—
Acid, Formic . . . . .	106	—	30	76
Acid, Oleic. . . . .	329	2	41	286
Acid, Oxalic . . . . .	92	—	36	56
Acid, Stearic . . . . .	118	53	23	42
Acid, Tartaric. . . . .	138	—	24	114
Acid, Various, N.O.S. . . . .	325	7	122	196
Aeroplanes & Parts. . . . .	776	624	—	152
Agricultural Implements. . . . .	76	24	40	12
Agricultural Implement Parts. . . . .	26	7	19	—
Alcohol, Industrial. . . . .	129	126	3	—
Alum. . . . .	238	1	104	133
Alumina, Hydrate. . . . .	11	—	3	8
Alumina, Sulphate of. . . . .	910	77	211	622
Alumino, Ferric. . . . .	528	—	—	528
Aluminum Bars & Ingots . . . . .	70	3	59	8
Aluminum Foil. . . . .	33	26	3	4
Aluminum, Mfrs of, N.O.S. . . . .	174	6	149	19
Aluminum Scrap . . . . .	84	20	41	23
Aluminum Sheets. . . . .	49	7	40	2
Aluminum Silico. . . . .	30	30	—	—
Ammonia, Bicarbonate. . . . .	16	—	2	14
Ammonia, Carbonate of. . . . .	71	2	27	42
Ammonia, Chloride. . . . .	75	5	31	39
Ammonia, Muriate of. . . . .	39	14	7	18
Ammonia, Nitrate of. . . . .	1,167	1,079	33	55
Ammunition. . . . .	11	9	1	1
Anchors . . . . .	34	—	—	34
Animal Foods, N.O.S. . . . .	286	21	136	129
Animals, Small. . . . .	51	1	—	50
Antimony. . . . .	21	—	—	21
Arrowroot . . . . .	150	—	35	115
Artists Materials. . . . .	62	8	43	11
Asbestos, Mfrs of. . . . .	441	53	62	326
Asphalt. . . . .	58	—	—	58
Automobiles & Parts. . . . .	1,983	103	18	1,862
Axles. . . . .	71	12	—	59

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Baby Carriages.....	155	61	33	61
Bags & Bagging (jute).....	1,882	1	1	1,880
Barium, Carbonate of.....	224	43	54	127
Barium, Chloride.....	91	40	17	34
Barium, Sulphate.....	22	—	—	22
Barley, Pot & Pearl.....	25	—	25	—
Barrels & Drums (empty).....	1,343	1,122	28	193
Barytes.....	983	50	29	904
Basic Slag.....	468	—	—	468
Basketware.....	558	275	139	144
Battery Plates.....	131	—	131	—
Bauxite Residue.....	19	—	—	19
Beans, Common.....	207	23	74	110
Beer.....	571	22	526	23
Beer Coloring.....	22	3	—	19
Bees Wax.....	68	3	22	43
Belting.....	62	24	6	32
Bicycles & Parts.....	1,204	743	321	140
Bicycles, Motor.....	125	51	4	70
Bird Cages.....	63	12	23	28
Biscuits.....	335	30	182	123
Biscuits, Dog.....	253	14	194	45
Black Plates.....	7,930	1,817	5,113	1,000
Black Sheets.....	9,824	657	5,209	3,958
Blanc Fixe.....	168	—	—	168
Bleaching Powder.....	688	72	178	438
Boats, Motor.....	12	—	—	12
Boats, N.O.S.....	16	12	3	1
Boiler Compound.....	15	—	—	15
Boiler Covering.....	42	—	—	42
Boiler Lagging.....	204	7	64	133
Bolts & Nuts.....	36	6	3	27
Bone Ash.....	31	22	1	8
Bone Dust .....	10	—	10	—
Books.....	1,779	259	1,138	382
Boots & Shoes.....	2,011	369	749	893
Bottle Capsules, Metal.....	70	7	20	43
Bottles, Empty, N.O.S.....	522	96	168	258
Bottles, Thermos.....	626	16	435	175
Boxes, Empty.....	22	5	10	7
Brass, Mfrs of.....	368	140	24	204
Brass Wire.....	15	10	—	5

COMMODITY	Distribution after Import			
	Total Tons	Rail Tons	Vessel Tons	Other Tons
Bread.....	104	6	85	13
Brick Dust.....	20	—	—	20
Brick, Fire.....	9,227	1,661	96	7,470
Bronze, Mfrs of.....	26	4	1	21
Bronze Powder.....	26	24	—	2
Bronze Wire.....	219	196	8	15
Brooms & Brushes.....	205	34	30	141
Bullion.....	15	—	—	15
Butter.....	76	—	—	76
Buttons.....	42	2	15	25
Calcium, Carbonate of.....	58	—	—	58
Calcium, Chloride.....	686	46	11	629
Canada Plate.....	3,401	280	698	2,423
Candles.....	39	2	36	1
Canned Goods, N.O.S.....	106	—	62	44
Caramel.....	57	19	7	31
Cardboard.....	353	125	85	143
Carpets & Matting.....	666	151	139	376
Casings, Sausage.....	308	32	51	225
Castings.....	313	224	63	26
Celluloid, Mfrs of.....	115	15	13	87
Celluloid Sheets.....	60	18	4	38
Cement, Building.....	418	47	127	244
Cement, N.O.S.....	29	4	2	23
Cereals.....	50	1	1	48
Chains.....	223	15	82	126
Chalk.....	131	13	100	18
Chalk, Precipitated.....	116	2	22	92
Charcoal.....	134	39	95	—
Charcoal, Animal.....	429	57	—	372
Charcoal, Dust.....	40	2	28	10
Cheese.....	383	117	68	198
Chemicals, N.O.S.....	2,189	286	604	1,299
Chicory.....	22	8	—	14
Chinaware.....	946	211	242	493
Chrometan.....	132	46	17	69
Church Ornaments.....	26	4	—	22
Clay, Burnt.....	41	—	21	20
Clay, China.....	10,106	8,000	5	2,101
Clay, Fire.....	377	121	1	255
Clay, N.O.S.....	52	5	22	25

COMMODITY	Total Tons	Distribution after Import		
		Rail Tons	Vessel Tons	Other Tons
Clay, Unmfrd.	43	—	—	43
Clocks	477	69	154	254
Clothes Pins	12	—	—	12
Coal, Anthracite	1,416,787	—	269,962	1,146,825
Coal, Bituminous	226,823			226,823
Cocoa	127	20	52	55
Cocoa Beans	6,182	37	1,371	4,774
Cocoa Butter	338	23	171	144
Coconuts	5,542	23	1,024	4,495
Coffee	4,778	39	714	4,025
Coffee Essence	30	—	22	8
Coke, N.O.S.	27,427	1	—	27,426
Confectionery	1,554	215	678	661
Copperas	176	—	—	176
Copper, Mfrs. of	145	32	15	98
Copper Matte	4,379	4,379	—	—
Copper, Sulphate of	646	161	20	465
Cordage	95	6	1	88
Cork, Board	813	—	49	764
Cork, Mfrs. of	440	25	153	262
Cork Waste	913	—	—	913
Cotton, Absorbent	115	—	100	15
Cotton, Raw	4,148	2,727	—	1,421
Cotton, Waste	262	63	4	195
Cream Separators	450	181	127	142
Cream of Tartar	238	6	107	125
Crockery	1,909	168	634	1,107
Crucibles	182	102	56	24
Cutlery	257	63	88	106
Degras	268	—	41	227
Dextrine	1,169	64	327	778
Disinfectants	344	16	69	259
Drugs & Medicines	428	13	37	378
Druggists Sundries	780	151	286	343
Dry Colors, N.O.S.	1,423	180	185	1,058
Dry Goods	24,621	7,654	5,846	11,121
Dyes	1,147	107	204	836
Earthenware	6,709	1,476	2,272	2,961
Effects	1,568	794	276	498
Electrical Apparatus	536	167	44	325

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Emery Cloth.....	12	1	—	11
Emery Powder.....	32	20	6	6
Enamelware.....	415	27	49	339
Engines.....	176	106	—	70
Extract, Sumac.....	30	—	26	4
Extracts, Various.....	139	4	39	96
Feathers.....	96	75	13	8
Felts, N.O.S.....	122	11	8	103
Fertilizers, N.O.S.....	60	55	—	5
Fibres.....	110	16	20	74
Filtermass.....	12	8	—	4
Filterpulp.....	12	—	—	12
Fire Arms.....	59	55	—	4
Fire Clay Retorts.....	153	153	—	—
Fishing Apparatus.....	198	124	60	14
Fish, Cured.....	2,011	1,078	383	550
Fish, Fresh or Frozen.....	14	—	—	14
Fish in Tins.....	1,369	180	771	418
Flax Seed.....	46	—	—	46
Flour, Bone.....	20	—	20	—
Flour, Potato.....	1,342	288	480	574
Flour, Sago.....	122	—	—	122
Flour, Tapioca.....	29	—	—	29
Flour, Wheat.....	9,072	100	267	8,705
Flour, Wood.....	22	22	—	—
Fluorspar.....	2,167	1,101	1,001	65
Fly Catchers.....	76	9	19	48
Forgings.....	110	110	—	—
Fruit, Dried.....	15,563	699	6,202	8,662
Fruit in Brine.....	1,441	—	396	1,045
Fruit in Tins.....	3,146	25	260	2,861
Fruit Juices.....	268	18	42	208
Fruit Pulp.....	642	33	278	331
Fruit, Raw.....	50,346	1,383	139	48,824
Fullers Earth.....	1,675	593	514	568
Furniture.....	1,673	479	643	551
Furs.....	428	54	23	351
Galvanized Sheets.....	3,389	28	138	3,223
Garden Bulbs.....	2,446	1,017	906	523
Gasoline in Bulk.....	80,377	—	—	80,377

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Gelatine.....	660	107	171	382
Ginger.....	187	—	28	159
Glass Jars, N.O.S.....	11	4	6	1
Glass Sheets.....	14,455	2,552	3,788	8,115
Glassware.....	7,566	509	2,766	4,291
Glue.....	530	32	211	287
Glycerine.....	556	262	128	166
Grain, Barley in Bags.....	48	20	—	28
Grain, Oats in Bags.....	38	—	—	38
Grain, Wheat in Bags.....	35	—	—	35
Grain, in Bulk Barley.....	29,579	—	29,579	—
Grain, in Bulk Corn.....	50,916	—	23,224	27,692
Grain, in Bulk Flax.....	47,486	—	31,356	16,130
Grain, in Bulk Oats.....	13,416	—	13,416	—
Grain, in Bulk Rye.....	158,633	—	158,633	—
Granite Blocks.....	2,295	1,255	824	216
Granite Monuments.....	261	87	5	169
Grease.....	79	8	23	48
Grindstones.....	95	21	19	55
Groceries, N.O.S.....	80	9	51	20
Gum, Various.....	456	123	27	306
Gypsum, Crude.....	109	8	2	99
 Hair.....	20	17	—	3
Hardware, N.O.S.....	726	156	224	346
Hatters Fur.....	337	247	2	88
Herbs.....	16	10	2	4
Hides.....	940	790	40	110
Hide Cuttings.....	19	19	—	—
Holloware.....	599	79	275	245
Hops.....	267	32	13	222
Horses.....	148	116	—	32
 Inks.....	63	9	25	29
Instruments, Musical.....	244	97	132	15
Instruments, Scientific.....	73	29	4	40
Insulators.....	123	18	16	89
Iron Ore.....	72,753	3	72,703	47
Iron, Pig.....	2,668	—	336	2,332
Iron Sand.....	165	84	52	29
Iron & Steel Balls.....	206	180	8	18
Iron & Steel Bands.....	162	—	—	162

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Iron & Steel Bars.....	5,467	1,095	1,761	2,611
Iron & Steel Billets & Blooms....	451	420	2	29
Iron & Steel Hoops.....	921	369	224	328
Iron & Steel, Mfrs. of, N.O.S.....	1,467	268	592	607
Iron & Steel Piping.....	1,777	532	151	1,094
Iron & Steel Plates.....	4,244	731	397	3,116
Iron & Steel Rods.....	31	—	23	8
Iron & Steel Scrap.....	40	40	—	—
Iron & Steel Shanks.....	16	—	—	16
Iron & Steel Sheets.....	12,072	126	503	11,443
Iron & Steel Skelp.....	5,330	654	—	4,676
Iron & Steel Strips.....	314	55	84	175
Iron & Steel Structural.....	5,605	1,649	675	3,281
Iron & Steel Tyres.....	3,165	947	21	2,197
Jute Cloth.....	4,024	490	109	3,425
Lamp Black.....	14	1	3	10
Lamps & Lanterns.....	62	7	5	50
Lanolin.....	129	46	6	77
Lard.....	24	—	5	19
Lawn Mowers.....	23	10	—	13
Lead, Acetate of.....	62	5	1	56
Lead, Arsenate of.....	57	30	—	27
Lead, Mfrs. of, N.O.S.....	55	9	4	42
Lead, Nitrate of.....	93	8	8	77
Lead Oxide, N.O.S.....	73	—	73	—
Lead, Sulphate of.....	34	—	3	31
Leather, in Bales.....	297	80	80	137
Leather, Mfrs. of.....	749	292	112	345
Leaves, Dried.....	33	2	8	23
Lentils.....	45	5	24	16
Licorice.....	21	21	—	—
Lime, Carbonate of.....	86	1	11	74
Lime, Chloride of.....	123	—	45	78
Lime, Nitrate of.....	193	—	—	193
Lime, Phosphate of.....	11	1	—	10
Linoleum.....	408	18	130	260
Liquors, Intoxicating.....	5,380	419	3,360	1,601
Litharge.....	254	81	5	168
Lithopone.....	4,306	892	169	3,245
Lobsters, in Tins.....	12	—	—	12

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Logs, Mahogany, etc.....	32	9	23	—
Macaroni.....	52	3	—	49
Mace.....	13	—	10	3
Machinery, N.O.S.....	5,000	2,938	282	1,780
Machines, Sewing.....	252	220	30	2
Magnesia.....	425	9	41	375
Magnesite.....	100	—	—	100
Magnesium, Carbonate of.....	35	21	14	—
Magnesium, Chlorate of.....	30	—	—	30
Magnesium, Sulphate of.....	593	353	47	193
Malt.....	4,236	—	838	3,398
Malt Extract.....	149	6	69	74
Malt Syrup.....	21	—	17	4
Manganese Ore.....	29,286	—	29,286	—
Manure.....	14	—	—	14
Marble Chips.....	276	73	—	203
Marble, Mfrs. of.....	47	4	4	39
Marble Slabs.....	37	35	—	2
Matches.....	150	—	—	150
Meal, Cocoanut.....	28	—	28	—
Meal, Soya.....	202	—	—	202
Meal, N.O.S.....	313	2	147	164
Meats, Cured.....	100	—	66	34
Meat, Extracts.....	163	—	—	163
Meats, in Tins.....	3,492	16	137	3,339
Metals, N.O.S.....	94	13	—	81
Meters.....	30	22	1	7
Milk, in Tins.....	24	—	12	12
Millboard.....	22	—	—	22
Millinery.....	1,193	604	231	358
Mineral Waters.....	1,445	123	55	1,2 7
Mineral White.....	11	—	—	11
Molasses.....	27,452	108	96	27,248
Moss.....	11	—	—	11
Mushrooms.....	106	7	49	50
Mustard.....	252	—	185	67
Mustard Bran.....	15	—	—	15
Mustard Seed.....	116	18	25	73
Naphthaline.....	263	3	50	210
Nickel Matte.....	899	773	—	126

COMMODITY	Total Tons	Distribution after Import		
		Rail Tons	Vessel Tons	Other Tons
Nickel Ore.....	87	—	—	87
Nickel, Sulphate of.....	98	98	—	—
Notions.....	734	181	225	328
Nuts, Edible, N.O.S.....	3,679	170	1,533	1,976
Nutmegs.....	55	—	28	27
Oakum.....	76	1	—	75
Oil Cloth.....	24	5	4	15
Oil, Bean.....	732	3	111	618
Oil, Castor.....	847	29	391	427
Oil, Cocoanut.....	926	11	24	891
Oil, Cod liver.....	1,236	131	685	420
Oil, Colza.....	24	2	—	22
Oil, Corn.....	200	—	200	—
Oil, Cotton Seed.....	1,201	644	17	540
Oil, Crude Petroleum, in Bulk.....	1,821,828	—	—	1,821,828
Oil, Essential.....	132	9	10	113
Oil, Fish.....	72	—	—	72
Oil, Linseed.....	4,185	1	980	3,204
Oil, Lubricating.....	542	109	259	174
Oil, Olive.....	1,306	53	475	778
Oil, Palm.....	737	463	20	254
Oil, Peanut.....	1,304	983	—	321
Oil, Rape.....	71	5	43	23
Oil, Resin.....	95	—	58	37
Oil, Seal.....	510	—	26	484
Oil, Various, N.O.S.....	287	29	40	218
Oil, Whale.....	136	4	4	128
Oilman's Stores, N.O.S.....	85	1	22	62
Olives.....	1,001	38	603	360
Oxides, N.O.S.....	21	1	20	—
Oyster Shells.....	1,385	—	—	1,385
Paints.....	148	10	45	93
Paper, Blotting.....	48	1	47	—
Paper, Greaseproof.....	153	40	29	84
Paper, Parchment.....	95	4	13	78
Paper, Printing.....	684	247	338	99
Paper, Stock.....	769	745	—	24
Paper, Wall.....	69	6	30	33
Paper, Wrapping.....	1,044	81	362	601
Paper, Various, N.O.S.....	2,109	230	515	1,364

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Paris Green.....	43	—	27	16
Paste.....	25	—	6	19
Peas.....	548	136	52	360
Peas, Split.....	98	—	4	94
Peat.....	37	—	—	37
Pebbles.....	2,056	2,024	10	22
Peels.....	964	6	629	329
Pepper.....	357	1	13	343
Perfumery.....	81	23	2	56
Peroxide.....	450	—	33	417
Phosphate Rock.....	6,162	—	—	6,162
Phosphates, N.O.S.....	22	16	—	6
Photo Supplies.....	143	95	21	27
Piassava.....	16	2	3	11
Pickles.....	42	—	10	32
Pictures & Frames.....	200	96	10	94
Pimento.....	162	1	66	95
Pipes, Tobacco, N.O.S.....	346	87	20	239
Pipes, Tobacco, Clay.....	31	2	—	29
Pitch.....	24	—	1	23
Plaster, N.O.S.....	18	3	13	2
Plumbago.....	71	1	1	69
Polishes.....	322	10	159	153
Potash, Carbonate of.....	270	—	6	264
Potash, Caustic.....	234	—	—	234
Potash, Chlorate of.....	116	—	—	116
Potash, Muriate of.....	13,255	—	7,285	5,970
Potash, Nitrate of.....	321	18	74	229
Potash, Sulphate of.....	983	—	—	983
Potash, Various, N.O.S.....	81	—	3	78
Preserves, N.O.S.....	304	7	209	88
Printed Matter.....	255	89	68	98
Propellors.....	47	3	7	37
Pulleys & Blocks.....	103	25	31	47
Pulpboard, N.O.S.....	43	8	4	31
Pumice Stone.....	318	1	—	317
Pumps.....	33	12	3	18
Putty.....	83	5	9	69
Pyrites.....	55	—	—	55
Radios & Parts.....	11	1	2	8
Rags.....	1,063	112	229	722
Rattans.....	64	7	2	55

COMMODITY	Total Tons	Distribution after Import		
		Rail Tons	Vessel Tons	Other Tons
Razors & Parts . . . . .	30	9	21	—
Resin . . . . .	458	—	1	457
Rice . . . . .	402	5	49	348
Rice, Unhulled . . . . .	6,205	—	3,281	2,924
Roots, N.O.S. . . . .	87	81	—	6
Rope . . . . .	385	73	71	241
Rubber, Crude . . . . .	4,684	33	4,197	454
Rubber, Mfrs. of . . . . .	1,939	354	508	1,077
Sal Ammoniac . . . . .	567	150	281	136
Salts, Bath . . . . .	32	4	16	12
Salt, Coarse . . . . .	25,650	—	7	25,643
Salts, Epsom . . . . .	696	—	103	593
Salt, Fine . . . . .	1,806	—	43	1,763
Salt, Gravy . . . . .	43	—	43	—
Salts, Health . . . . .	237	—	163	74
Salt, Licks . . . . .	23	—	—	23
Salts, Rochelle . . . . .	55	—	—	55
Salts, Various, N.O.S. . . . .	88	1	1	86
Sand in Bulk . . . . .	6,945	—	—	6,945
Sand, N.O.S. . . . .	11	5	6	—
Sauces . . . . .	360	1	272	87
Sawdust . . . . .	202	71	—	131
Scales . . . . .	12	3	5	4
Scenery . . . . .	36	—	—	36
Seaweed . . . . .	34	2	19	13
Seed, Bird . . . . .	386	45	133	208
Seed, Caraway . . . . .	31	—	8	23
Seed, Coriander . . . . .	25	1	9	15
Seed, Garden . . . . .	499	153	191	155
Seed, Grass . . . . .	30	6	23	1
Seed, Rape . . . . .	102	26	49	27
Seed, N.O.S. . . . .	90	9	29	52
Shellac . . . . .	36	2	—	34
Shovels . . . . .	20	4	7	9
Shrubs . . . . .	1,287	662	86	539
Silverware . . . . .	267	90	31	146
Sisal . . . . .	1,868	799	1,013	56
Skins, Calf . . . . .	18	15	—	3
Skins, Sheep . . . . .	196	167	23	6
Skins, N.O.S. . . . .	27	11	3	13
Slate . . . . .	27	—	23	4

## Distribution after Import

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Soap, Castile.....	406	46	249	111
Soap, Liquid.....	18	—	10	8
Soap, Toilet.....	139	25	71	43
Soda, Acetate.....	28	—	—	28
Soda, Ash.....	55	2	—	53
Soda, Bicarbonate of.....	611	—	102	109
Soda, Carbonate of.....	157	—	157	—
Soda, Caustic.....	735	—	—	735
Soda, Chlorate of.....	92	7	85	—
Soda, Cyanide of.....	931	429	205	297
Soda, Nitrate of.....	5,583	3,607	568	1,408
Soda, Perborate of.....	21	—	2	19
Soda, Phosphate of.....	20	—	7	13
Soda, Silicate of.....	162	6	—	156
Soda, Sulphate of.....	1,035	52	113	870
Soda, Sulphide of.....	2,107	217	1,143	747
Soda, Sulphite of.....	347	91	75	181
Soda, Various, N.O.S.....	435	5	17	413
Soot.....	12	—	6	6
Spices, N.O.S.....	304	3	60	241
Sponges.....	138	12	1	125
Sporting Goods.....	276	117	46	113
Starch, N.O.S.....	763	68	10	590
Starch, Potato.....	39	—	39	—
Statice.....	48	18	30	—
Stationery.....	509	134	253	122
Statuary.....	186	26	36	124
Stearine.....	24	1	13	10
Stone, unmfrd.....	192	2	—	190
Stoves.....	17	4	1	12
Straw.....	17	17	—	—
Sugar, Burnt.....	15	—	—	15
Sugar of Milk.....	49	—	46	3
Sugar, Raw.....	230,136	6,236	5,361	218,539
Sugar, Refined.....	6,201	—	6,196	5
Sulphur.....	27,942	8,494	18,829	619
Sundries.....	698	187	144	367
Superphosphates.....	2,287	—	—	2,287
Syrup, Corn.....	93	3	35	55
Syrup, N.O.S.....	134	2	124	8
Talc.....	503	5	33	465

COMMODITY	Total Tons	Distribution after Import		
		Rail Tons	Vessel Tons	Other Tons
Tallow . . . . .	197	—	197	—
Tanners Bate . . . . .	96	64	—	32
Tanners Extract . . . . .	115	12	10	93
Tapioca . . . . .	104	2	22	80
Tar . . . . .	152	10	1	141
Tares . . . . .	22	—	22	—
Tea . . . . .	6,264	704	648	4,912
Teazels . . . . .	15	15	—	—
Thread . . . . .	533	36	51	446
Tiles . . . . .	1,087	78	238	771
Tin Ingots . . . . .	509	28	50	431
Tin Oxide . . . . .	34	20	—	14
Tin Plates . . . . .	52,573	24,141	7,651	20,781
Tin, Sheets . . . . .	108	5	22	81
Tinware . . . . .	750	27	173	550
Tobacco, Mfrs. of . . . . .	142	35	21	86
Tobacco, Raw Leaf . . . . .	56	22	—	34
Tobacconist's Sundries . . . . .	1,212	34	142	1,036
Toilet Preparations . . . . .	178	48	60	70
Tomato Paste . . . . .	316	2	—	314
Tools, N.O.S. . . . .	586	92	116	378
Toys . . . . .	9,516	930	4,296	4,290
Tractors & Parts . . . . .	54	32	—	22
Trucks . . . . .	149	30	6	113
Tubes, Collapsible . . . . .	12	1	1	10
Twine, Binder . . . . .	5,772	49	3,120	2,603
Twines, N.O.S. . . . .	282	30	67	185
Typewriters . . . . .	51	41	9	1
Vacuum Cleaners . . . . .	248	4	4	240
Valises . . . . .	61	14	29	18
Valves . . . . .	16	2	—	14
Varnish . . . . .	88	13	39	36
Vegetable Fat . . . . .	218	7	6	205
Vegetables, Dried . . . . .	15	—	3	12
Vegetables, in Brine . . . . .	74	6	55	13
Vegetables in Tins . . . . .	280	10	17	253
Vegetables, Raw, N.O.S. . . . .	5,985	57	219	5,709
Vinegar . . . . .	22	—	10	12
Wadding . . . . .	94	19	50	25
Washing Blue . . . . .	10	5	4	1

COMMODITY	Distribution after Import			
	Total Tons	Rail Tons	Vessel Tons	Other Tons
Wax.....	1,824	4	4	1,816
Wheels & Parts.....	120	53	—	67
Whiting.....	6,483	2,805	786	2,892
Window Frames.....	59	2	4	53
Window Rollers.....	41	2	31	8
Wines.....	4,517	232	1,889	2,396
Wire, Barbed.....	458	—	458	—
Wire Cloth.....	72	20	2	50
Wire, Mfrs. of, N.O.S.....	77	17	9	51
Wire Netting.....	333	58	10	265
Wire, Rods.....	33	10	23	—
Wire, Rope.....	81	33	17	31
Wire, Steel in Coils.....	2,701	449	665	1,587
Woodenware, N.O.S.....	478	106	230	142
Woodpulp.....	208,229	326	207,903	—
Wool.....	2,823	1,968	367	488
Wool, Greasy.....	510	478	13	19
Wool, Rock.....	13	—	—	13
Wool, Tops & Noils.....	1,787	1,039	617	131
Wool Waste.....	422	126	51	245
Yarns.....	6,718	3,636	1,332	1,750
Yeast.....	66	6	12	48
Zinc Chloride.....	305	99	116	90
Zinc Dust.....	18	—	—	18
Zinc Oxide.....	2,579	1,250	230	1,099
Zinc Sheets.....	345	28	23	294
Zinc, Sulphate of.....	571	—	427	144
Zinc White.....	1,220	—	—	1,220
Zinc, Various, N.O.S.....	16	1	1	14
	5,088,209	137,630	989,460	3,961,119

## EXPORTS 1934

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Acid, Acetic.....	<b>5,720</b>	5,163	—	557
Acid, Various, N.O.S.....	<b>15</b>	—	4	11
Aeroplanes and Parts.....	<b>206</b>	41	—	165
Agricultural Implements.....	<b>6,853</b>	3,685	3,145	23
Agricultural Implements, Parts..	<b>25</b>	—	25	—
Alcohol, Industrial.....	<b>19</b>	4	—	15
Alum.....	<b>16</b>	—	16	—
Aluminum, Bars and Ingots....	<b>273</b>	—	273	—
Aluminum Foil.....	<b>26</b>	—	26	—
Aluminum, Mfrs. of, N.O.S.....	<b>123</b>	43	49	31
Aluminum Rods.....	<b>10</b>	10	—	—
Aluminum Scrap .....	<b>253</b>	72	119	62
Aluminum Sheets.....	<b>191</b>	11	175	5
Ammonia.....	<b>13</b>	1	5	7
Ammonia, Sulphate of.....	<b>764</b>	764	—	—
Ammunition.....	<b>37</b>	6	—	31
Animal Food, N.O.S.....	<b>4,704</b>	383	754	3,567
Animals, Small.....	<b>34</b>	—	—	34
Asbestos, Crude.....	<b>3,098</b>	2,850	—	248
Asbestos Fibre.....	<b>1,001</b>	961	—	40
Asbestos, mfrs. of.....	<b>46</b>	19	1	26
Asbestos, Roofing.....	<b>251</b>	245	—	6
Asbestos Shingles.....	<b>94</b>	—	—	94
Asphalt .....	<b>130</b>	48	2	80
Asphalt Shingles.....	<b>16</b>	—	—	16
Automobiles and Parts.....	<b>116,945</b>	56,751	58,163	2,031
Axles.....	<b>30</b>	30	—	—
Babbitt Metal.....	<b>168</b>	147	4	17
Baby Carriages.....	<b>11</b>	1	—	10
Bags and Bagging (jute).....	<b>1,227</b>	8	11	1,208
Baking Powder.....	<b>50</b>	1	35	14
Barium, Carbonate of.....	<b>20</b>	20	—	—
Barrels and Drums (empty)....	<b>2,122</b>	351	130	1,641
Basketware.....	<b>18</b>	16	2	—
Batteries.....	<b>645</b>	107	347	191
Battery Plates.....	<b>40</b>	—	—	40
Beans, Common.....	<b>1,542</b>	1,538	—	4
Bedding.....	<b>1,118</b>	75	20	1,023
Bee Comb Foundation.....	<b>124</b>	—	—	124
Beer.....	<b>225</b>	21	41	163

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Beet Pulp.....	61	—	—	61
Belting.....	41	22	4	15
Bicycles & Parts.....	28	26	1	1
Biscuits.....	107	40	32	35
Blood, Dried.....	538	68	—	470
Boats, N.O.S.....	31	31	—	—
Boilers & Parts.....	71	18	—	53
Bolts & Nuts.....	1,117	17	8	1,092
Bone Black.....	15	—	15	—
Bone Meal .....	835	—	—	835
Books.....	80	66	4	10
Boots & Shoes.....	48	11	28	9
Bottle Capsules, Metal.....	77	11	28	38
Bottles, empty, N.O.S.....	491	2	144	345
Boxes, empty.....	151	56	14	81
Bran.....	5,945	1,743	507	3,695
Brass, mfrs. of.....	236	194	39	3
Brass Scrap.....	848	58	150	640
Brick, Fire.....	70	64	—	6
Brick, N.O.S.....	23	23	—	—
Bronze Powder.....	199	5	—	194
Brooms & Brushes.....	166	57	25	84
Bullion.....	149	8	—	141
Butter.....	63	3	3	57
Buttermilk.....	79	36	—	43
Candles.....	21	—	10	11
Canned Goods, N.O.S.....	7,344	916	5,984	444
Captax.....	79	79	—	—
Carbide, N.O.S.....	326	155	—	171
Cardboard.....	218	71	6	141
Carpets & Matting.....	11	7	3	1
Casings, Sausage.....	1,727	738	793	196
Castings.....	20	—	—	20
Catsup.....	6,724	680	6,028	16
Cattle.....	16,003	15,819	—	184
Cattle Hoofs.....	241	55	89	97
Cattle Horns.....	12	—	6	6
Celluloid, mfrs. of.....	17	14	2	1
Cement, Building.....	11,013	—	—	11,013
Cement, N.O.S.....	130	77	6	47
Cereals.....	20,568	20,448	3	117

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Chains.....	414	408	—	6
Charcoal, Animal.....	112	—	112	—
Charcoal Dust.....	146	—	—	146
Cheese.....	27,176	1,458	1,368	24,350
Chemicals, N.O.S.....	126	32	25	69
Chinaware.....	15	9	5	1
Clay, Fire.....	11	—	—	11
Cleansers.....	439	272	56	111
Clocks.....	42	38	—	4
Clothes Pins.....	263	—	—	263
Coal, Anthracite.....	271	—	—	271
Cobalt Ore.....	513	513	—	—
Cobalt Oxide.....	96	96	—	—
Cobalt Residue.....	114	114	—	—
Cocoa Husks.....	254	—	254	—
Coffee.....	26	—	—	26
Coke.....	79	45	—	34
Conduits, Fibre.....	96	86	—	10
Confectionery.....	309	157	76	76
Copper Bars.....	92	—	—	92
Copper Billets.....	17	17	—	—
Copper Cakes.....	2,526	2,498	—	28
Copper Cathodes.....	12,661	12,661	—	—
Copper Concentrates.....	10	—	—	10
Copper Ingots.....	5,881	5,881	—	—
Copper, mnfrs. of.....	160	24	136	—
Copper Matte.....	26,861	26,861	—	—
Copper Rods.....	57,623	57,595	—	28
Copper Scrap.....	804	4	137	663
Copper Sheets.....	73	56	17	—
Copper, Sulphate of.....	38	5	—	33
Copper Wire.....	994	288	35	671
Cork Waste.....	44	—	44	—
Cotton Waste.....	245	—	—	245
Cream Separators.....	44	44	—	—
Crockery.....	10	9	—	1
Cyanide.....	1,688	1,688	—	—
Dextrine.....	124	93	31	—
Disinfectants.....	19	1	6	12
Doors.....	332	221	50	61
Dowels.....	308	82	—	226

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Drugs & Medicines.....	487	163	88	236
Druggist's Sundries.....	420	203	50	167
Dry Colors, N.O.S.....	258	51	200	7
Dry Goods.....	3,317	2,510	23	784
Dyes.....	24	7	3	14
Earthenware.....	115	70	27	18
Effects, Settlers.....	2,045	668	294	1,083
Eggs in Shell.....	2,914	1,735	—	1,179
Electrical Apparatus.....	2,162	1,658	145	359
Electrodes.....	2,833	2,515	318	—
Enamelware.....	23	10	11	2
Engines.....	145	116	1	28
Exhibits.....	22	22	—	—
Extracts, Various.....	32	3	21	8
Feathers.....	47	—	47	—
Feldspar.....	37	37	—	—
Felt, N.O.S.....	267	249	—	18
Felt, Roofing.....	381	370	—	11
Fibres.....	13	13	—	—
Fibreboard.....	3,266	3,258	—	8
Fishing Apparatus.....	10	8	—	2
Fish, Cured.....	1,884	48	—	1,836
Fish, Fresh or Frozen.....	1,272	1,216	—	56
Fish in Tins.....	1,527	1,502	—	25
Flax Seed.....	67	67	—	—
Flooring, Hardwood.....	4,073	3,591	—	482
Flour, Corn.....	281	254	16	11
Flour, Wheat.....	202,222	93,840	45,295	63,087
Fly Catchers.....	22	1	—	21
Foundry Supplies.....	27	—	—	27
Fruit, Dried.....	98	—	16	82
Fruit, in Tins.....	7,052	1,817	5,231	4
Fruit Jars.....	1,095	1,091	3	1
Fruit Juices.....	77	55	18	4
Fruit Pectin.....	1,038	1,020	—	18
Fruit Pulp.....	124	122	2	—
Fruit, Raw.....	50,927	50,221	13	693
Furniture.....	1,617	1,176	23	418
Furs.....	463	229	4	230

COMMODITY	Carried before Export			
	Total Tons	Rail Tons	Vessel Tons	Other Tons
Garden Bulbs.....	2,152	2,151	—	1
Gasoline in Bulk.....	1,571	—	—	1,571
Gasoline in Pkgs.....	97	—	—	97
Gelatine.....	75	33	42	—
Glass Jars, N.O.S.....	278	276	—	2
Glass Sheets.....	93	91	—	2
Glassware.....	372	360	2	10
Glucose.....	444	23	420	1
Glue.....	183	1	179	3
Grain, Barley in Bags.....	63	—	62	1
Grain, Buckwheat in Bags.....	29	—	—	29
Grain, Corn in Bags.....	301	—	—	301
Grain, Oats in Bags.....	7,151	2,568	—	4,583
Grain, Wheat in Bags.....	3,552	118	—	3,434
Grain, Bulk, Barley.....	73,291	—	73,291	—
Grain, Bulk, Corn.....	1,428	—	1,428	—
Grain, Bulk, Buckwheat.....	2,692	—	2,692	—
Grain, Bulk, Oats.....	45,915	—	45,915	—
Grain, Bulk, Rye.....	3,240	—	3,240	—
Grain, Bulk, Wheat.....	998,743	—	998,743	—
Graphite.....	89	—	86	3
Grease.....	398	256	129	13
Grinding Wheels.....	82	73	9	—
Groats.....	70	35	—	35
Groceries, N.O.S.....	195	9	156	30
Gypsum Lath.....	413	413	—	—
Hair.....	1,824	1,035	648	141
Handles, Wooden.....	801	744	17	40
Hardware, N.O.S.....	1,034	799	47	188
Hay.....	2,992	—	—	2,992
Hides.....	900	345	170	384
Holloware.....	33	9	22	2
Honey.....	639	233	74	332
Hops.....	904	896	—	8
Horses.....	124	47	—	77
Horse Shoes.....	54	—	—	54
Inks.....	95	10	17	68
Instruments, Musical.....	89	60	10	19
Instruments, Scientific.....	11	10	1	—
Insulators.....	426	189	214	23

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Iron Pig.....	12	—	—	12
Iron & Steel Bars.....	282	89	32	161
Iron & Steel Hoops.....	25	25	—	—
Iron & Steel, mnfrs. of, N.O.S.....	303	174	76	53
Iron & Steel Piping.....	2,320	203	385	1,732
Iron & Steel Pipe Fittings.....	130	82	4	44
Iron & Steel Scrap.....	13,768	1,698	3,129	8,941
Iron & Steel Sheets.....	10	—	—	10
Iron & Steel Skelps.....	73	73	—	—
Iron & Steel, Structural.....	494	176	271	47
Iron & Steel Tanks.....	12	—	11	1
 Lamp Black.....	29	29	—	—
Lamps & Lanterns.....	86	28	33	25
Lard.....	61,620	52,818	8,786	16
Last Blocks.....	10	—	—	10
Lawn Mowers.....	55	32	—	23
Lead, mnfrs. of N.O.S.....	14	—	—	14
Lead Scrap.....	35	—	—	35
Leather in Bales.....	250	235	15	—
Leather, mnfrs. of.....	2,025	1,448	4	573
Leather Scrap.....	1,521	1,521	—	—
Lime.....	66	60	—	6
Lime, Acetate of.....	527	509	—	18
Lime, Phosphate of.....	48	48	—	—
Lignin Liquor.....	381	381	—	—
Linoleum.....	125	25	—	100
Liquors, Intoxicating.....	335	29	207	99
Lobsters in Tins.....	1,130	1,088	—	42
Lumber, Dressed.....	365	—	—	365
 Macaroni.....	2,103	142	181	1,780
Machinery, N.O.S.....	2,330	1,635	481	214
Machines, Sewing, N.O.S.....	749	704	—	45
Magnesite.....	1,243	1,243	—	—
Malt.....	76	34	—	42
Maple Blocks.....	593	588	—	5
Maple, Rollers.....	46	46	—	—
Maple Squares.....	39	34	—	5
Maple Strips.....	508	247	—	261
Maple Sugar.....	14	6	2	6
Maple Syrup.....	10	10	—	—

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Match Blocks.....	171	171	—	—
Match Splits.....	1,615	1,615	—	—
Meal, Alfalfa.....	502	239	—	263
Meal, Corn.....	378	72	30	276
Meal, Oat.....	939	766	143	30
Meal, Oilcake.....	5,574	156	—	5,418
Meal, N.O.S.....	79	2	—	77
Meats, Cured.....	50,251	44,300	1,635	4,316
Meat, Extracts.....	34	—	34	—
Meats, Fresh or Frozen.....	9,652	8,460	4	1,188
Meats in Tins.....	4,351	4,253	50	48
Metals, N.O.S.....	80	42	4	34
Meters.....	46	19	17	10
Mica.....	88	30	—	58
Middlings.....	699	206	314	179
Milk, Powdered.....	1,221	1,180	—	41
Milk, Skimmed.....	26	25	—	1
Milk in Tins.....	6,749	6,738	—	11
Millinery.....	181	152	11	18
Mineral Waters.....	36	—	6	30
Mules.....	339	339	—	—
Mushrooms.....	50	33	—	17
 Nails .....	 2,175	 149	 44	 1,982
Nickel Cathodes.....	1,041	1,041	—	—
Nickel Ingots & Slabs.....	292	292	—	—
Nickel Matte.....	241	241	—	—
Nickel Oxide.....	1,280	1,280	—	—
Nickel Scrap.....	15	3	1	11
Nickel Shot.....	131	131	—	—
Nickel, N.O.S.....	18	18	—	—
Notions.....	54	36	11	7
Nuts, Edible, N.O.S.....	19	8	3	8
Oats, Rolled, in Bags.....	1,953	1,464	290	199
Oats, Rolled, N.O.S.....	5,647	5,552	36	59
Oilcloth.....	299	—	—	299
Oil, Fuel.....	30,574	—	—	30,574
Oil, Lard.....	163	163	—	—
Oil, Linseed.....	43	2	—	41
Oil, Lubricating.....	526	406	75	45
Oil, Oleo.....	362	343	19	—
Oil, Various, N.O.S.....	170	11	48	111

COMMODITY	Carried before Export			
	Total Tons	Rail Tons	Vessel Tons	Other Tons
Oil, Vegetable.....	<b>66</b>	—	66	—
Olives.....	<b>12</b>	5	7	—
Oxides, N.O.S.....	<b>29</b>	29	—	—
Paints.....	<b>320</b>	47	113	160
Paper, Blotting.....	<b>13</b>	10	—	3
Paper Board.....	<b>46</b>	—	13	33
Paper, Printing.....	<b>49,078</b>	48,803	—	275
Paper, Roofing.....	<b>602</b>	79	—	523
Paper Stock.....	<b>82</b>	69	—	13
Paper, Wall.....	<b>1,134</b>	177	738	219
Paper, Wrapping.....	<b>936</b>	773	—	163
Paper, Various, N.O.S.....	<b>1,020</b>	588	188	244
Paste.....	<b>169</b>	1	—	168
Peas.....	<b>400</b>	374	11	15
Peas, Split.....	<b>76</b>	61	—	15
Phosphorus.....	<b>1,116</b>	868	248	—
Photo Supplies.....	<b>702</b>	27	673	2
Pickles.....	<b>716</b>	16	689	11
Pictures & Frames.....	<b>42</b>	26	12	4
Pipes, Tobacco, N.O.S.....	<b>21</b>	11	8	2
Plaster Board.....	<b>606</b>	571	—	35
Plaster, N.O.S.....	<b>254</b>	191	—	63
Plywood.....	<b>22</b>	22	—	—
Polishes.....	<b>20</b>	17	1	2
Potash, Muriate of.....	<b>15</b>	—	—	15
Potatoes.....	<b>289</b>	18	5	266
Poultry.....	<b>280</b>	183	—	97
Preserves, N.O.S.....	<b>28</b>	—	18	10
Printed Matter.....	<b>189</b>	66	89	34
Pulleys.....	<b>19</b>	8	11	—
Pulpboard, N.O.S.....	<b>15,662</b>	15,340	235	87
Pumps.....	<b>37</b>	36	1	—
Putty.....	<b>42</b>	1	—	41
Radiators.....	<b>31</b>	1	—	30
Radios & Parts.....	<b>79</b>	53	22	4
Rags.....	<b>153</b>	44	34	75
Razors & Parts.....	<b>16</b>	—	—	16
Refrigerators.....	<b>558</b>	237	195	126
Rice.....	<b>90</b>	—	—	90
Roots, N.O.S.....	<b>75</b>	75	—	—

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Rope.....	19	9	1	9
Rubber, Mfrs. of.....	18,173	14,088	1,228	2,857
Rubber Scrap.....	429	281	112	36
Safes.....	24	—	21	3
Sal Ammoniac.....	20	20	—	—
Salt, Coarse.....	13	12	—	1
Salt, Fine.....	595	491	48	56
Sand, Carborendum.....	25	25	—	—
Sauces.....	52	15	37	—
Sausages & Sausage Meat.....	38	25	—	13
Seed, Garden.....	435	137	296	2
Seed, N.O.S.....	75	34	40	1
Seggars.....	19	—	19	—
Selenium.....	23	20	—	3
Shawinigan Black.....	1,526	1,416	28	82
Ship Stores.....	9,696	—	—	9,696
Shooks.....	3,225	2,845	—	380
Shorts.....	1,940	737	537	666
Shovels.....	291	258	—	33
Shrubs.....	29	3	—	26
Silex.....	418	—	418	—
Silverware.....	11	9	—	2
Skewers .....	10	9	1	—
Skins, Sheep.....	26	26	—	—
Snaths.....	23	1	—	22
Soap, Common.....	23	—	—	23
Soap, Powder.....	98	—	—	98
Soap, Toilet.....	2,750	13	2,693	44
Soapstone.....	259	259	—	—
Soda, Bicarbonate of.....	48	—	11	37
Soda, Carbonate of.....	14	—	—	14
Soda, Chlorate of.....	588	588	—	—
Soda, Chloride of.....	55	55	—	—
Soda, Cyanide of.....	18	18	—	—
Soda, Sulphide of.....	57	57	—	—
Soda, Various, N.O.S.....	67	30	36	1
Solder Dross.....	155	155	—	—
Soup in Tins.....	9,954	66	9,869	19
Spelter .....	10,248	10,237	—	11
Spoolwood.....	49	—	—	49
Sporting Goods.....	233	70	52	111

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Staples, Metal.....	75	43	—	32
Starch, N.O.S.....	183	178	—	5
Stationery.....	352	245	19	88
Stearine.....	93	93	—	—
Steel Wool.....	63	63	—	—
Stone, Mfrs. of.....	12	—	—	12
Stoves.....	2,817	2,547	10	260
Straw.....	44	24	—	20
Sugar, Refined.....	812	1	35	776
Sundries.....	1,304	208	68	1,028
Sweepings, Jewellers.....	26	15	6	5
Syrup, Corn.....	744	2	741	1
Talc.....	1,094	1,079	—	15
Tallow.....	13	7	—	6
Tar.....	9,074	—	—	9,074
Tarvia.....	338	48	—	290
Tea.....	60	5	—	55
Tiles.....	12	5	1	6
Tin Dross.....	32	—	24	8
Tin Plates.....	821	716	—	105
Tin Scrap.....	563	307	—	256
Tinware.....	48	4	7	37
Tobacco, Mfrs. of.....	45	9	7	29
Tobacco, Raw Leaf.....	1,352	1,119	3	230
Tobacconist's Sundries.....	53	32	19	2
Toilet Preparations.....	914	710	32	172
Tomato Juice.....	1,705	151	1,554	—
Tomato Paste.....	322	40	281	1
Tomato Pulp.....	243	67	176	—
Tools, N.O.S.....	822	625	46	151
Toys.....	4,307	3,702	600	5
Tractors & Parts.....	408	293	115	—
Trucks.....	1,804	775	946	83
Twine, Binder.....	3,763	1,062	2,663	38
Twines, N.O.S.....	23	13	10	—
Typewriters.....	179	91	76	12
Vacuum Cleaners.....	299	189	107	3
Valves.....	254	102	—	152
Varnish.....	61	21	3	37
Vegetable Fat.....	47	1	46	—

## Carried before Export

COMMODITY	Total Tons	Rail Tons	Vessel Tons	Other Tons
Vegetables in Tins.....	<b>3,211</b>	1,841	1,200	170
Vegetables, Raw, N.O.S.....	<b>663</b>	91	346	226
Veneer.....	<b>782</b>	781	—	1
Vinegar.....	<b>41</b>	—	—	41
Wallboard.....	<b>4,452</b>	3,912	427	113
Washing Machines.....	<b>2,459</b>	2,021	436	2
Wax.....	<b>269</b>	260	4	5
Wheat Germ.....	<b>935</b>	335	357	243
Wheels & Parts.....	<b>151</b>	112	39	—
Whiting.....	<b>227</b>	226	—	1
Window Rollers.....	<b>208</b>	208	—	—
Wire, Barbed.....	<b>1,366</b>	1,283	—	83
Wire Cloth.....	<b>305</b>	50	234	21
Wire, Fencing.....	<b>360</b>	188	148	24
Wire, Mfrs. of, N.O.S.....	<b>102</b>	80	—	22
Wire Netting.....	<b>20</b>	14	2	4
Wire, Steel in Coils.....	<b>6,515</b>	2,273	106	4,136
Woodenware, N.O.S.....	<b>1,656</b>	1,494	103	59
Woodpulp.....	<b>28,166</b>	28,166	—	—
Wool.....	<b>1,061</b>	1,054	5	2
Wool, Greasy.....	<b>72</b>	72	—	—
Wool, Rock.....	<b>98</b>	98	—	—
Wool Waste.....	<b>155</b>	18	5	132
Yarns.....	<b>132</b>	94	21	17
Yeast.....	<b>59</b>	—	41	18
Zinc Dross.....	<b>432</b>	113	—	319
Zinc Sheets.....	<b>207</b>	194	10	3
Zinc, Various, N.O.S.....	<b>84</b>	84	—	—
 <b>Lumber Exported</b>	 <b>2,258,700</b>	 712,835	 1,305,389	 240,476
 <b>Hay Exported</b>	 <b>48,540</b>			
		 <b>22,271</b>		
		 <b>2,329,511</b>		

## DOMESTIC COMMODITIES

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Acetone.....	9	—	—	—	9	—
Acid, Acetic.....	50	39	—	—	11	—
Acid, Sulphuric.....	196	193	1	—	2	—
Acid, Various.....	189	180	—	—	9	—
Aerated Waters.....	1	—	—	—	1	—
Aeroplanes & Parts...	15	12	3	—	—	—
Agricultural Implements	144	—	1	—	143	—
Alcohol, Industrial....	724	—	651	—	73	—
Alum.....	3	—	—	—	3	—
Aluminum, Mfrs. of...	8	—	—	—	8	—
Ammonia, N.O.S.....	204	51	—	16	137	—
Ammonia, Sulphate of.	35	35	—	—	—	—
Ammunition.....	6	—	2	—	4	—
Animal Food, N.O.S...	191	68	—	12	111	—
Asbestos, Cement.....	9	—	—	—	9	—
Asbestos, Gravel.....	159	156	—	—	3	—
Asbestos, Mfrs. of....	139	90	—	—	49	—
Asbestos, N.O.S.....	76	30	—	—	46	—
Asbestos, Shingles....	85	—	—	—	85	—
Asphalt.....	945	—	122	—	88	735
Asphalt, Shingles....	177	—	—	—	177	—
Automobiles & Parts..	150	—	—	14	136	—
Axes.....	350	350	—	—	—	—
Bags & Bagging (Jute)	308	—	39	49	220	—
Barrels& Drums, Empty	88	21	37	26	4	—
Barytes.....	22	—	22	—	—	—
Basket Ware.....	33	28	5	—	—	—
Batteries.....	22	—	—	—	22	—
Beans, Common.....	363	54	6	—	303	—
Beans, Vanilla.....	3	—	—	2	1	—
Bedding.....	195	12	91	—	92	—
Beer.....	41	—	—	—	41	—
Beet Pulp.....	150	18	—	—	132	—
Belting.....	85	—	—	—	85	—
Bicycles & Parts....	13	8	—	—	5	—
Biscuits.....	21	—	8	—	13	—
Biscuits, Dog.....	2	—	—	—	2	—
Boats.....	98	25	73	—	—	—
Boilers & Parts.....	121	—	24	—	97	—
Bolts, Nuts & Screws.	355	116	26	21	192	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Books . . . . .	105	93	6	—	6	—
Boots & Shoes . . . . .	42	—	14	—	28	—
Bottle Capsules . . . . .	35	—	—	—	35	—
Bottles, Empty . . . . .	1,258	157	9	6	1,086	—
Boxes, Empty . . . . .	243	127	37	28	51	—
Bran . . . . .	1,199	605	—	467	127	—
Brass, Mfrs. of . . . . .	43	—	—	—	43	—
Brick, Fire . . . . .	394	—	89	301	4	—
Brick, N.O.S. . . . .	35	35	—	—	—	—
Bronze, Mfrs. of . . . . .	6	—	—	—	6	—
Bronze, Powder . . . . .	1	—	—	—	1	—
Brooms . . . . .	17	11	—	—	6	—
Brushes . . . . .	18	5	—	—	13	—
Butter . . . . .	27	22	—	—	5	—
Calcium Chloride . . . . .	31	31	—	—	—	—
Candles . . . . .	18	—	—	—	18	—
Canned Goods . . . . .	4,097	115	91	753	3,138	—
Carbide, N.O.S. . . . .	1,145	—	—	—	1,145	—
Cardboard . . . . .	74	—	—	—	74	—
Carpets & Matting . . . . .	26	—	—	—	26	—
Casings, Sausage . . . . .	14	13	1	—	—	—
Castings . . . . .	230	82	22	—	126	—
Catsup . . . . .	71	14	—	—	57	—
Cattle . . . . .	5	—	—	—	5	—
Cellophane . . . . .	2	—	—	—	2	—
Cement, Building . . . . .	62,249	—	201	—	60,608	1,440
Cement, N.O.S. . . . .	21	—	1	—	20	—
Cement, Roofing . . . . .	12	—	—	—	12	—
Cereals, N.O.S. . . . .	499	310	—	—	189	—
Chains . . . . .	147	—	—	—	147	—
Charcoal . . . . .	2	—	—	—	2	—
Cheese . . . . .	1,878	29	1,636	—	213	—
Chemicals, N.O.S. . . . .	340	—	215	16	109	—
Chicory . . . . .	44	—	—	—	44	—
Chinaware . . . . .	13	—	—	12	1	—
Cider . . . . .	18	—	—	—	18	—
Cinders . . . . .	200	200	—	—	—	—
Clay, China . . . . .	1	—	—	—	1	—
Clay, Fire . . . . .	151	71	20	—	60	—
Cleansers . . . . .	848	62	3	—	783	—
Clocks . . . . .	4	—	—	—	4	—
Clothes Pins . . . . .	10	—	—	—	10	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Coal, Anthracite (American).....	5,541	5,541	—	—	—	—
Coal, Anthracite (Scotch).....	16,939	16,898	—	—	—	41
Coal, Anthracite (Welsh).....	6,478	6,478	—	—	—	—
Coal, Bituminous (American).....	1,000	1,000	—	—	—	—
Coal, Bituminous (Canadian).....	1,920,139	23,027	—	1,896,767	—	345
Cocoa, Including Powder.....	114	18	—	—	96	—
Coffee.....	39	—	3	2	34	—
Coke (Canadian)....	665	645	20	—	—	—
Confectionery.....	92	—	3	26	63	—
Contractor's Plant....	481	74	119	288	—	—
Copper Bars.....	17	—	—	—	17	—
Copper Ingots.....	1	—	—	—	1	—
Copper, Mfrs. of.....	41	—	—	—	41	—
Copper, Sheets & Slabs	7	—	—	—	7	—
Copper, Sulphate.....	1	—	1	—	—	—
Cordage.....	1	—	1	—	—	—
Cornstarch.....	259	—	—	—	259	—
Cotton, N.O.S.....	192	162	27	—	3	—
Cotton, Raw.....	26	12	—	—	14	—
Cottonwaste.....	28	—	—	—	28	—
Crayons.....	4	—	—	—	4	—
Cream Separators....	12	12	—	—	—	—
Creosote.....	3	—	—	—	3	—
Crockery.....	190	175	2	12	1	—
Cutlery.....	1	—	—	—	1	—
Cyanide.....	44	—	—	—	44	—
Disinfectants.....	26	13	—	—	13	—
Druggist Sundries....	47	—	—	—	47	—
Drugs & Medicines...	212	—	29	10	173	—
Drums, Empty (Steel)....	174	134	20	16	4	—
Dry Colours.....	122	—	—	—	122	—
Dry Goods.....	649	—	18	8	623	—
Earthenware.....	179	40	—	10	129	—
Earth, Refining.....	181	181	—	—	—	—
Effects, Settlers.....	67	—	—	34	33	—

		Rail		Vessel		
		In	Out	In	Out	Other
Eggs, in Shell.....	29	14	—	14	1	—
Electrical Apparatus..	115	41	—	8	66	—
Electrodes.....	5	—	—	—	5	—
Enamelware.....	83	33	2	—	48	—
Engines & Parts.....	7	—	—	1	6	—
Extracts, Various.....	13	—	—	—	13	—
Feathers.....	10	—	1	2	7	—
Feed, Cattle & Poultry	215	93	—	—	122	—
Felt N.O.S.....	12	—	—	2	10	—
Fertilizers.....	211	196	15	—	—	—
Fireworks.....	1	—	—	—	1	—
Fish, Cured.....	159	—	14	141	4	—
Fish, Fresh or Frozen.	371	313	37	20	1	—
Fish, in Tins (Lobster)	28	—	—	23	5	—
Fish, in Tins (N.O.S.).	1,591	15	—	1,315	261	—
Fish, in Tins (Salmon)	2,830	—	—	2,786	44	—
Flax Seed.....	7,526	7,523	—	—	3	—
Flour, Corn.....	26	26	—	—	—	—
Flour, N.O.S.....	24,118	8,574	138	12,900	2,506	—
Flour, Wheat.....	445	445	—	—	—	—
Fly Catchers.....	1	—	—	1	—	—
Forgings.....	2	—	—	—	2	—
Fruit, Dried.....	253	110	17	51	75	—
Fruit, Green or Raw ..	2,679	2,151	448	41	39	—
Fruit, Juice.....	59	—	2	1	56	—
Fruit, Pulp.....	17	—	—	17	—	—
Fruit, in Tins.....	698	15	63	143	477	—
Furniture.....	596	9	81	8	498	—
Galvanized Sheets....	1,255	469	772	6	8	—
Gasoline, in Bulk.....	483,329	1,226	14,576	38,061	429,466	—
Gasoline, in Drums...	2,100	—	—	—	2,100	—
Gear, Contractors....	554	410	144	—	—	—
Ginger.....	2	—	—	2	—	—
Glass Sheets.....	3	—	—	—	3	—
Glass Ware.....	326	78	7	2	239	—
Glucose.....	352	—	23	—	329	—
Glue.....	132	—	5	13	114	—
Glycerine.....	2	—	—	—	2	—
Grain, in Bags (Barley)	48	26	—	—	22	—
Grain, in Bags (Corn).	6	—	—	—	3	3
Grain, in Bags (N.O.S.)	226	112	—	101	13	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Grain, in Bags (Oats) .	<b>167</b>	40	—	—	127	—
Grain, in Bags (Wheat)	<b>172</b>	—	161	—	4	7
Grain, for Local Deliv- ery.....	<b>165,345</b>	24,802	—	140,543	—	—
Graphite.....	<b>1</b>	—	—	—	1	—
Grease.....	<b>38</b>	28	—	1	9	—
Grind Stones.....	<b>3</b>	—	—	—	3	—
Groceries, N.O.S.....	<b>194</b>	13	27	11	143	—
Gypsum.....	<b>21,942</b>	—	—	21,892	50	—
Hair.....	<b>3</b>	—	—	1	2	—
Handles, Wooden.....	<b>391</b>	358	2	2	29	—
Hardware. N.O.S.....	<b>3,372</b>	497	—	24	2,851	—
Harness.....	<b>2</b>	—	—	2	—	—
Hats.....	<b>1</b>	—	—	—	1	—
Hay.....	<b>22,521</b>	2,074	250	—	20,197	—
Hides.....	<b>421</b>	283	15	114	9	—
Honey.....	<b>270</b>	—	—	—	270	—
Hops.....	<b>14</b>	—	1	5	8	—
Horse Shoes.....	<b>51</b>	—	—	—	51	—
Inks.....	<b>93</b>	—	—	—	93	—
Instruments, Musical..	<b>16</b>	—	—	4	12	—
Iron, Pig.....	<b>863</b>	—	—	—	863	—
Iron & Steel Bars....	<b>5,314</b>	880	2,340	253	1,841	—
Iron & Steel Hoops...	<b>10</b>	—	—	—	10	—
Iron & Steel Mrs. of ..	<b>1,341</b>	283	344	42	672	—
Iron & Steel Pipe Fittings.....	<b>77</b>	—	—	1	76	—
Iron & Steel Piping...	<b>857</b>	38	—	26	793	—
Iron & Steel Sheets...	<b>6</b>	5	—	—	1	—
Iron & Steel Structural	<b>540</b>	291	249	—	—	—
Jute, Burlap.....	<b>103</b>	103	—	—	—	—
Jute, Mfrs. of.....	<b>1</b>	—	—	—	1	—
Jute, Webbing.....	<b>51</b>	45	—	—	6	—
Kalsomine.....	<b>294</b>	—	—	—	294	—
Lamps & Lanterns...	<b>17</b>	10	—	—	7	—
Lard.....	<b>201</b>	—	66	—	135	—
Lead, Mrs. of.....	<b>329</b>	—	—	1	328	—
Lead, Sheet.....	<b>4</b>	—	—	—	4	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Leather, in Bales . . . . .	12	—	—	—	12	—
Leather, Mfrs. of . . . . .	39	—	7	—	32	—
Lime, Juice . . . . .	2	—	—	2	—	—
Lime, N.O.S. . . . .	162	160	—	—	2	—
Lime, Phosphate of . . . . .	50	50	—	—	—	—
Linoleum . . . . .	67	—	—	—	67	—
Liquors, Intoxicating . . . . .	267	40	16	38	173	—
Litharge . . . . .	28	—	—	—	28	—
Lithopone . . . . .	30	—	30	—	—	—
Lye . . . . .	6	—	—	—	6	—
Macaroni & Spaghetti . . . . .	138	—	—	—	138	—
Machinery, N.O.S. . . . .	1,845	400	1,064	114	267	—
Machines, Sewing . . . . .	24	—	—	1	23	—
Magnesium, Carbonate of . . . . .	677	659	—	—	18	—
Malt, Extract . . . . .	30	—	—	—	30	—
Matches . . . . .	2	—	—	—	2	—
Meal, Bone . . . . .	1	—	—	—	1	—
Meal, Fish . . . . .	5	—	—	5	—	—
Meal, N.O.S. . . . .	561	25	470	—	66	—
Meal, Oilcake . . . . .	278	31	126	—	121	—
Meats, Cured . . . . .	210	—	—	2	208	—
Meats, Extracts . . . . .	44	—	—	—	44	—
Meats, Fresh or Frozen . . . . .	1,474	1,458	—	2	14	—
Meats, in Tins . . . . .	187	31	—	18	138	—
Metals, N.O.S. . . . .	18	—	—	—	18	—
Middlings . . . . .	1,320	524	3	633	160	—
Milk, Powdered . . . . .	107	28	—	—	79	—
Milk, in Tins . . . . .	264	236	—	6	22	—
Mill Waste . . . . .	75	—	75	—	—	—
Mining Cars . . . . .	23	8	15	—	—	—
Molasses . . . . .	15,672	18	15,609	18	27	—
Mops . . . . .	7	—	3	—	4	—
Mustard . . . . .	17	—	—	—	17	—
Nails & Tacks . . . . .	1,199	33	102	227	837	—
Nuts, Edible, N.O.S. . . . .	83	30	—	42	11	—
Oakum . . . . .	60	60	—	—	—	—
Oats, Feed . . . . .	1,041	298	5	661	77	—
Oats, Rolled in Bags . . . . .	1,777	722	25	829	201	—
Oats, Rolled, N.O.S. . . . .	750	628	—	95	27	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Oilcloth.....	91	—	—	—	91	—
Oil, Coal, in Barrels...	755	—	—	581	174	—
Oil, Coal, in Bulk.....	19,970	27	75	14,977	4,891	—
Oil, Cod Liver.....	51	—	—	47	4	—
Oil, Corn.....	59	—	—	—	59	—
Oil, Creosote, in Bulk.	14,911	—	—	14,911	—	—
Oil, Crude, in Bulk ...	337,975	—	—	15,158	322,817	—
Oil, Fuel, in Bulk.....	346,448	554	21,646	18,100	305,182	966
Oil, Fuel, in Drums...	5	—	—	—	5	—
Oil, Lemon.....	1	—	—	1	—	—
Oil, Linseed.....	1,120	380	649	—	91	—
Oil, Lubricating, in Bulk	67,112	506	—	—	66,606	—
Oil, Lubricating, in Drums.....	232	—	—	1	231	—
Oil, N.O.S.....	71	—	—	29	42	—
Oil, Olive.....	34	—	15	—	19	—
Oil, Peanut.....	21	—	—	—	21	—
Oil, Pilchard.....	243	—	—	243	—	—
Oil, Seal.....	18	—	—	2	16	—
Oil, Tanning.....	44	—	—	44	—	—
Oil, Whale.....	23	—	—	23	—	—
Olives.....	10	—	—	—	10	—
Ovaltine.....	45	—	—	—	45	—
Oysters.....	1	—	—	1	—	—
Oxides, N.O.S.....	2	—	—	—	2	—
Paints.....	577	19	8	12	538	—
Paper, Board.....	84	34	—	—	50	—
Paper, Mfrs. of.....	785	342	—	23	420	—
Paper, Printing.....	66	—	—	—	66	—
Paper, Roofing.....	718	35	—	—	683	—
Paper, Stock.....	812	45	767	—	—	—
Paper, Toilet.....	100	—	1	99	—	—
Paper, Various, N.O.S.	87	40	—	—	47	—
Paper, Wall.....	297	22	—	—	275	—
Paper, Waxed.....	198	197	—	—	1	—
Paper, Wrapping.....	272	132	2	—	138	—
Paris Green.....	1	—	—	—	1	—
Paste.....	31	—	—	—	31	—
Paving Blocks.....	4,428	4,428	—	—	—	—
Peanuts.....	6	—	—	5	1	—
Peas.....	103	30	—	73	—	—
Peas, Split.....	1	—	—	—	1	—

	Rail	Vessel			
		In	Out	In	Out Other
Peels.....	1	—	—	—	1 —
Pepper.....	35	—	—	35	— —
Peroxide.....	1	—	—	—	1 —
Phosphate.....	84	25	—	—	59 —
Photo Supplies.....	5	—	—	—	5 —
Pickles.....	7	—	—	—	7 —
Pictures & Frames....	17	—	—	—	17 —
Pitch.....	1	—	—	—	1 —
Plaster, N.O.S.....	282	60	194	—	28 —
Plumber's Supplies....	210	—	—	—	210 —
Polishes.....	102	—	—	1	101 —
Potash, N.O.S.....	25	25	—	—	— —
Potatoes.....	11,999	7,950	120	3,925	4 —
Poultry.....	35	35	—	—	— —
Preserves, N.O.S.....	75	33	5	4	33 —
Printed Matter.....	77	20	—	1	56 —
Pulpboard, N.O.S.....	6	—	6	—	— —
Pulpwood.....	53	—	—	53	— —
Putty.....	36	—	—	—	36 —
Radiators.....	72	—	—	—	72 —
Radios & Parts.....	1	—	—	—	1 —
Rags.....	2,251	272	1,978	—	1 —
Refrigerators.....	1	—	—	—	1 —
Rice.....	1,515	—	—	1,338	177 —
Rivets.....	46	—	30	—	16 —
Rope.....	4	—	—	—	4 —
Rubber, Mfrs. of.....	49	—	1	—	48 —
Safe, Iron.....	3	—	—	—	3 —
Salad Dressing.....	108	—	107	—	1 —
Salt, Coarse.....	1,368	—	—	—	1,368 —
Salt, Fine.....	4,607	595	—	—	4,012 —
Salts, Epsom.....	1	—	—	—	1 —
Salts, Health.....	1,215	—	3	—	1,212 —
Salts, Various.....	21	20	—	1	— —
Sand, in Bulk.....	35,326	411	—	31,866	— 3,049
Sauces.....	5	—	—	—	5 —
Sawdust.....	12	—	—	—	12 —
Scales, Weighing.....	6	—	—	—	6 —
Scrap, Aluminum.....	22	—	—	—	22 —
Scrap, Brass.....	15	—	14	1	— —
Scrap, Copper.....	11	—	11	—	— —

	<b>Rail</b>	<b>Vessel</b>				
		In	Out	In	Out	
Scrap, Iron.....	<b>1,265</b>	588	403	224	50	—
Scrap, Lead.....	<b>3</b>	—	—	3	—	—
Scrap, Rope.....	<b>4</b>	—	—	4	—	—
Scrap, Rubber.....	<b>19</b>	—	19	—	—	—
Scrap, Steel.....	<b>4,494</b>	3,327	1,031	136	—	—
Seed, N.O.S.....	<b>279</b>	24	39	—	216	—
Shellac.....	<b>9</b>	—	—	8	1	—
Shipstores.....	<b>120</b>	—	14	—	106	—
Shoe Shanks.....	<b>4</b>	—	—	4	—	—
Shooks.....	<b>540</b>	539	—	—	1	—
Shorts.....	<b>1,981</b>	745	3	1,108	125	—
Shovels.....	<b>16</b>	—	—	—	16	—
Silverware.....	<b>3</b>	—	—	—	3	—
Skins, Calf.....	<b>29</b>	—	29	—	—	—
Skins, N.O.S.....	<b>14</b>	—	10	4	—	—
Slate.....	<b>31</b>	31	—	—	—	—
Soap, Common.....	<b>315</b>	238	—	—	77	—
Soap, Powder.....	<b>169</b>	86	—	—	83	—
Soap, Toilet.....	<b>187</b>	76	—	1	110	—
Soda, Bicarbonate of..	<b>460</b>	51	201	—	208	—
Soda, Caustic.....	<b>3</b>	—	—	—	3	—
Soda, Sal.....	<b>534</b>	—	329	—	205	—
Soda, Various, N.O.S..	<b>198</b>	40	—	40	118	—
Soup, in Tins.....	<b>934</b>	—	—	1	933	—
Spices, N.O.S.....	<b>36</b>	—	—	36	—	—
Spikes.....	<b>92</b>	—	—	—	92	—
Spoolwood.....	<b>1,441</b>	1,438	—	3	—	—
Sporting Goods.....	<b>33</b>	10	—	—	23	—
Staples, Metal.....	<b>66</b>	—	—	3	63	—
Starch, N.O.S.....	<b>471</b>	68	—	—	403	—
Stationery.....	<b>221</b>	55	—	—	166	—
Steel, Beams.....	<b>130</b>	125	5	—	—	—
Steel, Billets & Blooms	<b>9,418</b>	9,326	92	—	—	—
Steel, Castings.....	<b>15</b>	—	7	—	8	—
Steel, Plates.....	<b>946</b>	727	183	26	10	—
Steel, Rails.....	<b>385</b>	104	229	20	32	—
Steel, Rods.....	<b>40</b>	40	—	—	—	—
Steel, Sheets.....	<b>351</b>	337	—	4	10	—
Stone, Crushed.....	<b>3,798</b>	33	—	—	5	3,760
Stoves & Furnaces....	<b>335</b>	297	2	—	36	—
Sugar, Refined.....	<b>55,361</b>	—	7,700	11,064	36,597	—
Sulphur, Mfrs. of.....	<b>2</b>	—	—	—	2	—
Sundries.....	<b>5,266</b>	67	333	167	4,699	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Syrup, Corn.....	<b>160</b>	—	4	—	156	—
Syrup, Malt.....	<b>17</b>	—	—	3	14	—
Syrup, Maple.....	<b>54</b>	—	—	—	54	—
Syrup, N.O.S.....	<b>115</b>	—	—	—	115	—
Tapioca.....	<b>5</b>	—	—	5	—	—
Tar.....	<b>2,211</b>	89	—	2,120	2	—
Tarpaulins.....	<b>1</b>	—	—	—	1	—
Tarvia.....	<b>31</b>	—	—	—	31	—
Tea.....	<b>521</b>	—	500	9	12	—
Thread.....	<b>12</b>	12	—	—	—	—
Tiles.....	<b>4</b>	—	4	—	—	—
Tin Plates.....	<b>17</b>	—	—	17	—	—
Tinware.....	<b>252</b>	208	12	1	31	—
Tobacco, Raw Leaf...	<b>1,485</b>	668	817	—	—	—
Tobacco, Mfrs. of...	<b>23</b>	—	—	—	23	—
Toilet Preparations...	<b>99</b>	—	—	30	69	—
Tomato Juice.....	<b>24</b>	—	—	—	24	—
Tools, N.O.S.....	<b>59</b>	—	—	1	58	—
Tooth Picks.....	<b>10</b>	—	—	—	10	—
Toys.....	<b>46</b>	—	—	2	44	—
Tractors & Parts....	<b>12</b>	—	—	11	1	—
Trees.....	<b>8</b>	8	—	—	—	—
Trunks.....	<b>9</b>	—	—	1	8	—
Tubes, Collapsible...	<b>9</b>	—	9	—	—	—
Turpentine.....	<b>4</b>	—	—	—	4	—
Twines, Binder.....	<b>46</b>	—	—	—	46	—
Twines, N.O.S.....	<b>31</b>	—	—	—	31	—
Vacuum Cleaners.....	<b>12</b>	—	—	—	12	—
Valves.....	<b>16</b>	—	—	1	15	—
Varnish.....	<b>64</b>	—	—	29	35	—
Vegetables, Raw.....	<b>1,771</b>	1,337	305	24	105	—
Vegetables, in Tins....	<b>1,833</b>	102	183	127	1,421	—
Vinegar.....	<b>436</b>	—	—	—	436	—
Wadding.....	<b>2</b>	—	—	—	2	—
Wallboard.....	<b>187</b>	—	45	—	142	—
Washing Blue.....	<b>19</b>	—	—	—	19	—
Washing Machines....	<b>77</b>	—	—	1	76	—
Wax.....	<b>123</b>	—	—	—	123	—
Wheat Germ.....	<b>5</b>	—	—	—	5	—
Wheels & Parts.....	<b>130</b>	—	—	—	130	—

COMMODITY	Total	Rail		Vessel		
		In	Out	In	Out	Other
Window Frames.....	<b>2</b>	—	—	—	2	—
Window Shades.....	<b>50</b>	—	—	—	50	—
Wine.....	<b>23</b>	—	—	—	23	—
Wire, Barbed.....	<b>448</b>	—	—	88	360	—
Wire, Copper.....	<b>29</b>	—	—	—	29	—
Wire, Fencing.....	<b>390</b>	—	—	—	390	—
Wire, Mfrs. of.....	<b>304</b>	—	—	1	303	—
Wire, Netting.....	<b>39</b>	—	—	—	39	—
Wire, Rods.....	<b>1,085</b>	—	—	113	972	—
Wire, Rope.....	<b>652</b>	—	—	—	652	—
Wire, Steel in Coils...	<b>2,378</b>	101	133	25	2,119	—
Woodenware.....	<b>330</b>	158	20	69	83	—
Woodpulp.....	<b>1,267</b>	—	—	1,249	18	—
Wool, Mfrs. of.....	<b>28</b>	10	—	1	17	—
Wool, Waste.....	<b>22</b>	—	1	—	21	—
Yarns.....	<b>77</b>	72	—	—	5	—
Zinc Ingots.....	<b>264</b>	264	—	—	—	—
Zinc Oxide.....	<b>140</b>	—	140	—	—	—
Zinc Sheets.....	<b>3</b>	—	—	—	3	—
Zinc Various.....	<b>1,209</b>	1,188	20	—	1	—
Total.....	<b>3,785,558</b>	153,772	79,503	2,238,509	1,303,428	10,346

## MISCELLANEOUS

Commodity	Total	Rail		Vessel		
		In	Out	In	Out	Other
Firewood (Cords).....	1,941	255	—	1,686	—	—
Grain Doors (Cars).....	12	9	3	—	—	—
Lumber, Dressed (Feet)....	2,700,587	515,377	—	1,967,753	217,457	—
Lumber, Rough (Feet).....	69,448,528	36,429,881	—	21,527,917	11,377,034	113,696
Ogilvie Flour Mills (Cars)	2,615	747	1,868	—	—	—
Lower St. Law- rence Freight (Tons)...	13,480	—	—	2,884	10,596	—
Railway Ties (Number) ..	20,472	20,472	—	—	—	—

## Estimated tonnage of above

COMMODITY	TONS
Firewood.....	1,941
Grain Doors.....	144
Lumber (Dressed).....	2,700
Lumber (Rough).....	69,449
Ogilvie Cars.....	104,600
Lower St. Lawrence Freight.....	13,480
Ties.....	1,024
Total Miscellaneous.....	193,338
Domestic.....	3,785,558
Total.....	3,978,896
Less Hay, Exported.....	22,271
Less Lumber, Exported.....	48,540
Total.....	3,908,085

### TONNAGE SUMMARY

	Rail	Vessel	Other	Total
Domestic.....	233,275	3,541,937	10,346	3,785,558
Miscellaneous.....	142,968	50,256	114	193,338
Domestic total....	376,243	3,592,193	10,460	3,978,896
Less Lumber exported.....				48,540
Less Hay exported.....				22,271
				3,908,085

### Distribution After Import

	Rail	Vessel	Other	Total
Import.....	137,630	989,460	3,961,119	5,088,209

### Carried Before Export

	Rail	Vessel	Other	Total
Export.....	712,835	1,305,389	240,476	2,258,700
Lumber exported.....				48,540
Hay exported.....				22,271
				2,329,511

### Distribution of Tonnage

	Rail	Vessel	Other
Domestic.....	376,243	3,592,193	10,460
Import.....	137,630	989,460	3,961,119
Export.....	712,835	1,305,389	240,476
			4,212,055

### Total Tonnage All Sources

	tons
Import.....	5,088,209
Export.....	2,329,511
Domestic.....	3,908,085
	11,325,805

### STATEMENT OF COAL AND COKE IMPORTS

#### Foreign Coal and Coke Imported by Vessel

	tons
British anthracite .....	1,302,343
German anthracite .....	65,053
United States anthracite .....	32,312
Belgian anthracite .....	11,620
British bituminous .....	211,603
United States bituminous .....	15,112
British coke .....	<u>27,427</u>
Total foreign by Vessel.....	1,665,470
	tons
Anthracite .....	1,411,328
Bituminous .....	226,715
Coke .....	<u>27,427</u>
	1,665,470

#### Other Coal and Coke Receipts

	tons
Canadian bituminous (by vessel from Nova Scotia) .....	1,896,767
Canadian bituminous (by rail in winter) .....	23,072
British anthracite (by rail in winter) .....	23,346
United States anthracite (rail) .....	5,670
United States bituminous (rail) .....	1,052
Canadian coke (rail) .....	<u>618</u>
Total .....	1,950,525
	tons
Foreign, by vessel .....	1,665,470
Canadian .....	1,920,457
Foreign, by rail .....	<u>30,068</u>
Grand Total .....	3,615,995
	tons
Bituminous .....	2,147,606
Anthracite .....	1,440,344
Coke .....	<u>28,045</u>
	3,615,995

## ENGINEERING DEPARTMENT

No development works of any consequence from the point of view of expenditure were undertaken during the season of 1934.

The only new works consisted of the installation of a few beacon lights at the end of some wharves and the removal by dredge of a few protuberances in the bed of the river in order to increase the nominal depth within the major portion of the Harbour to that of the Ship Channel. In previous years the Harbour was advertised as twelve inches shallower than the Channel.

The present condition of the river, with its surface level at an elevation 30 inches lower than that of the standard low level stage of previous seasons (viz. 94.58 H.D.), made it important to do away with the former difference in the depth of the major part of the Harbour compared with that of the Channel. The work completed during the season has allowed ships to load to 12" deeper draught than in previous years, except at the shallow berths, viz. Victoria Basin, Sutherland Pier, the Westerly upper portion of Windmill Point Basin, the inner channel from Section 62 to Section 75, and the inner channel from Section 95 to Section 99. Under the present adverse conditions of the river, this small item of dredging can be considered as a very important Harbour improvement.

The Engineering Department, following authorization by Ottawa, was also entrusted with the design of a monumental base to receive a bronze bust of Jacques Cartier presented to the Federal Government by the Government of France, which was installed on the former Montreal Harbour Bridge, and the few alterations rendered necessary through the changing of the name of the bridge to that of "Jacques Cartier Bridge." The designing and carrying out of these works, including the decoration scheme, the inauguration of the bust and the change of name entailed, were all carried out by and under the Engineering Department.

The following are the items of Harbour improvements undertaken or continued during the season:

### **Wharves.**

Raising of a few feet of wharf superstructure at section 40.  
 Completion of fill behind wharf wall at section 59.  
 Completion of mole at Shell-Lasalle Oil Wharf, section 104.  
 Completion of fill at McColl-Frontenac Oil Wharf, section 99.

Continuation of reconstruction of Ogilvie Raceway at section 5W, under the Windmill Point Wharf.

### **Dredging.**

Odd items of deepening dredging were carried out at different locations within the Harbour.

These and the maintenance, repair and operation activities, described hereinafter, constitute the works performed during the season by the Department, together with the general surveys carried out, and studies of works contemplated for the future.

### **PUBLIC WORKS CONSTRUCTION ACT, 1934**

The Commissioners' Chief Engineer was also entrusted by Order-in-Council with the design and supervision of a few items of work under the Public Works Construction Act of 1934 carried out in the Harbour. All the items were given out to Contractors by the Department of Marine, except the paving item which is being carried out departmentally by the Commissioners.

The items are:—

- Item 104—Repaving of certain Harbour surfaces.
- Item 105—Reconstruction of raceways at Windmill Point.
- Item 106—Certain protection works at Elevator No. 3.
- Item 107—Railway Track Embankment, sections 101 to 110, Montreal East, P.Q.
- Item 108—Raising of wharf, Sections 38, 39 and 40.
- Item 109—Painting of the structural work of Jacques-Cartier Bridge.

## NEW WHARVES

### **Continuation of Shore Wharf, Section 40.**

The concrete superstructure over the last 20 ft. of the timber crib at the extreme downstream end of this shore wharf was raised from the crib level to Elevation 106.00.

Approximately 140 cu. yds. of concrete were used in this extension.

### **Continuation of Shore Wharf, Section 59.**

The area behind the extension of this wharf built in 1932 was completely reclaimed during the season. Approximately 7,600 cubic yards of filling material were deposited during the season.

### **Shell Oil-LaSalle Petroleum, Section 104.**

The construction of the mole between the inshore end of the Shell-LaSalle Wharf at Montreal East was completed during the season, thus establishing direct communications between this wharf and the mainland. Approximately 4,000 cubic yards of fill used were in the completion of this mole.

### **McColl-Frontenac Oil Wharf, Section 99.**

The reclaiming work behind the new extension to this wharf, built in 1933, was practically completed this season. In all, some 75,000 cubic yards of filling material were deposited this year behind the new cribs and along the mole, which was so widened to allow the circulation of vehicular and motor traffic to the wharf from the mainland.

## EXTENT OF WHARVES

**The extent of the Wharves and Piers at the end of the season of 1934 is as follows:**

30 ft. depth, and over, at

O. L. W.....	38,821	lin. ft. or 7.3524 miles
25 ft. to 30 ft. depth.....	14,643	do      2.7733 do
Total deep draught.....	53,464	do      10.1257 do
20 ft. depth and under.....	1,824	do      0.3454 do
Total wharfage end of 1934	55,288	do      10.4711 do
Total wharfage end of 1933	55,288	do      10.4711 do

## WATER MAIN AND RACEWAY

### Nicolet St. Water main.

The old 6" water main which was laid along Nicolet St., through the subway and up along the ramp to Tarte Pier was replaced by a 12" main laid to conform to the altered profile of this street.

A meter chamber was constructed for the housing of the water meters and approximately 735 lin. ft. of main were laid to within a few feet of the existing and serviceable main on Tarte Pier. It is expected that this main will be completed before the opening of navigation in 1935.

### Ogilvie Raceway.

Work on the reconstruction of that portion of the Ogilvie Raceway from the Harbour Boundary across to the Windmill Point Basin was continued during the season.

All the excavation work was completed and 4 steel pipes 5'8" inside diameter approximately 75 ft. long each were laid from the wooden portion of the flume located on the Ogilvie property.

Some 11,000 bags of dry-mix concrete were used to make the connections between the new steel pipes and the wooden portion of the flume as well as for the bracing between each pipe and sides of the cut or embankment.

The railway steel girder spanning this flume was removed as soon as the backfilling under the railway tracks was finished. This flume can now be completed as soon as the reconstruction of the face of the Windmill Point Wharf is carried out.

## RAILWAY CONSTRUCTION

### Bickerdike Pier.

A new track 518 ft. in length was laid parallel to and along the cope of the concrete wharf on the East side of the Bickerdike Pier.

The extent of the Harbour Commissioners' Railway tracks at the end of 1934 is as follows:—

	Lin. ft.	Miles
South of Lachine Canal, Bickerdike Pier, Windmill Pt. Wharf and West.....	50,517	9.5676
To Guard Pier.....	10,400	1.9697
Sections 12 to 46, High Level, Main line.....	57,079	10.8104
To Piers, elevators, cross-overs, sidings, etc.....	130,184	24.6560
Sections 35-46, low level, main line....	10,080	1.9091
Sections 46-101, high level, main line.	54,134	10.2526
To wharves, industries, etc.....	52,418	9.9276
At South Shore, St. Lambert.....	2,300	0.4356
Grand total tracks, end of 1934..	<hr/> 367,112	<hr/> 69.5286
Grand total tracks, end of 1933..	<hr/> 368,652	<hr/> 69.8203
Decrease in 1934.....	1,540	0.2917

## DREDGING

The work of Capital account dredging undertaken and accomplished during the season consists of the removal of a number of shoals in various parts of the upper Harbour with the object of bringing the depth of water to a common level with that of the Ship Channel.

Previous to the completion of this work there was a difference of one foot between the depth of water in the major part of the upper Harbour and the Ship Channel. In the course of previous years' maintenance dredging operations, and those of testing and sweeping, it was found that, while a large portion of the river bed had been cleared to Ship Channel depth, there remained several comparatively small tracts of bed rock in the inner Harbour, as well as a few nests of boulders and patches of softer material in the Ship Channel.

These were successfully removed and, at the same time the Basin between the Bickerdike and the Guard Piers was widened by 50 feet on the whole 1,300 ft. length of the Basin, as also was the upstream end of the Shore Channel between Sections 58 and 62.

The Imperial Oil Wharf berth at Sections 101-102 was also deepened from 28 to 30 ft. at the standard 93.58 datum.

The areas of rock removed proved to be of the hardest variety ever encountered within the Harbour limits.

Work on the McColl-Frontenac Wharf mole was carried out by means of derricks; also the completion of the crib filling. This berth was also deepened to conform to the Ship Channel depth.

### Maintenance Dredging.

Only one dredge and two floating derricks were employed on maintenance dredging during the season.

Many areas, both large and small were cleared up. The dredge was used exclusively in swift waters or where a sufficient accumulation of material warranted the use of such a unit. In other instances, the cleaning up was carried out with the aid of the derricks working as clam dredges, which succeeded in removing many isolated boulders, submerged logs, several cubic yards of coal, wire cables, old wreckages, etc.

The deeper portion of Windmill Pt. Basin, the Bickerdike Basin berths, and the upper Harbour fairway were given particular care.

The Drilling and Blasting boat was commissioned for the first time in a number of years for the breaking up of the shoals' rock heads.

Spoil from the dredging operations was used to reinforce embankments subject to ice and wave-erosion within the Harbour.

### **Wharf Examination.**

The derricks were made use of for the purpose of subaqueous surveys in locations where the swift waters necessitated special equipment for the purpose.

### **Freeing of Ice-bound Tugs.**

The two Harbour Commissioners' tugs "Aberdeen" and "David Seath" caught in an ice jam in the fall of 1933 and in which they spent the winter off Tarte Pier, were freed without the slightest damage on the 28th of March by the Department of Marine Ice Breaker "Saurel" assisted by the "N. B. McLean". The tugs were towed into Vickers Basin and were found intact.

The following are the quantities of dredging and filling for the Season:—

<b>Maintenance:</b>	Cu. Yds.	Total
		Cu. Yds. (Scow)
Ship Channel.....	14,625	
Bickerdike Basin.....	5,750	
Windmill Pt. Basin.....	4,300	
Sections 12-19.....	13,500	
"    24-37.....	3,950	
"    45-46.....	18,950	
"    57-76, Inside Channel...	19,650	
"    94-110, Inside Channel..	8,475	
(Representing an approximate area covered by Maintenance Dredging of 206,660 sq. yds.).		
<b>Capital:</b>		
Bickerdike Basin.....	7,150	
Windmill Point Basin.....	500	
Sections 12-13.....	2,475	
Section 40.....	900	
Section 59.....	8,550	
Imperial Oil Wharf.....	2,500	
Total dredged Material.....		<u>111,275</u>
<b>Filling (By Derrick):</b>		
Maintenance—Guard Pier.....	9,925	
Sections 58-61.....	11,650	
Section 99.....	72,400	93,975
(By Dump Scow)		
To Spoil bank.....	17,300	
Total dredged Material to fill....		<u>111,275</u>

**Sundry Items of Filling (By Derrick):****Clammed Material:**

Guard Pier.....	1,175
Section 99.....	650
	1,825
Ballast, Rubbish, etc., Guard Pier.	2,275

Total Sundry Items of Fillings by Derrick.....	4,100
	_____

**Earth, Cinders, etc., from City Contractors:**

	Cu. Yds. by Team or Truck (Estimated)
Bickerdike Pier.....	9,650
Raceway No. 7.....	500
Section 32.....	800
Sections 34-35.....	5,950
Section 39.....	4,500
Shed 15A, Aylwin St.....	1,000
Sections 58-59.....	7,600
Alexandria Pier.....	800
	_____
Total Material to Fill by Team or Truck.	30,800
	_____

## ELECTRICAL BRANCH

### Power and Operation:

The Commissioners purchased, under contract, electrical energy from the Montreal Light, Heat & Power Cons., throughout the year, this energy being supplied to their several sub-stations located at suitable points in the Harbour where it was transformed and re-distributed to operate their plant and equipment as well as to service outside Companies operating within the Harbour boundaries, as follows:—

	H.P. Hours
Memorial Tower.....	17,963
Receiving Shanty.....	359
Harbour Lighting.....	880,016
Railway System.....	1,645,575
Loco. Round House.....	92,491
Traffic Shanties.....	5,942
Electric Hoists.....	31,761
Conveyor Galleries, Nos. 1 and 2.....	655,266
Elevator No. 1.....	1,033,613
Elevator No. 1— Grain Trimmers.....	638
Elevator No. 2.....	694,806
Elevator No. 3.....	829,140
Elevator No. 3—Grain Trimmers.....	84
Elevator "B".....	688,361
Storage Warehouse.....	3,459,517
Head Office.....	108,781
Victoria Pier Office.....	35,630
Berri St. Office.....	6,691
Machine Shop.....	358,607
Guard Pier Repair Shops.....	42,814
Station No. 1.....	470,643
Floating Equipment.....	19,236
Outside Companies.....	1,837,098
Special shed Lighting.....	16,431

### Electrical Sub-Stations:

*Sub-Station No. 1.*—This station, located at the east end of Elevator No. 1, is supplied by the Power Company with 11,500 volts during the navigation season, and only at such times as the elevator is operating. At all other periods, it is serviced with 2,200 volts from Station No. 4 at Beaudry Street.

The capacity of the station proper is 8,000 KVA with an additional 2,500 KVA in the distribution room at Elevator No. 2, the whole being interconnected with substations Nos. 3 and 4.

The total power received through this station during the year 1934 from the Power Company was 1,345,006 K.W.Hrs.

During the past year, an Oil Heating System was installed in this station, which had been heated by electricity by means of obsolete type heaters which were far from economical.

*Sub-Station No. 3.*—This station, located at the eastern end of the Harbour Yard Shops, is supplied with 11,500 volts by the Power Company during the navigation season, and only at such times as Elevator No. 3 is operating. At all other periods, the service is taken from Station No. 4 through 2,200 volt tie-in-lines.

The station has a capacity of 8,000 KVA and is interconnected with Stations Nos. 1 and 4 through 2,200 volt tie-in-lines.

The total power received through this station from the Power Company during 1934 was 704,000 K.W.Hrs.

*Sub-Station No. 4.*—This station, located at the eastern end of the Storage Warehouse at Beaudry Street, is serviced by the Power Company with 11,500 volts. It is the only station to be operating 24 hours per day all the year round.

During the Winter season it feeds Stations Nos. 1, 3 and 5, and during each night of the navigation season it serves Stations Nos. 1 and 3.

The station has a capacity of 8,000 KVA and is equipped with three generator sets to convert AC to DC at 2,400 volts for the operation of the electric railway system.

It is intended primarily to service the Storage Warehouse, Electric Railway System and Freight Sheds 24 to 27 together with their Electric Hoists.

In addition it feeds the Harbour Lighting, Jacques-Cartier Bridge lighting, outside Companies as far east as Section 42 and other miscellaneous services.

The total power received through this station from the Power Company in 1934 was 7,464,000 K.W.Hrs.

*Sub-Station No. 5.*—This station, located near Elevator "B" at Windmill Point, is supplied by the Power Company with 11,500 volts during the season of navigation only. For the winter months a 2,200 volt line is erected over the Lachine Canal, in this manner the services are taken care of either by Station No. 1 or No. 4.

The station has a capacity of 6,000 KVA and is forced to operate 24 hours per day during the navigation season owing to its isolated position due to the intervening Canal. This difficulty could only be surmounted by the erection of a tower of steel to carry the necessary lines over the Canal. This proposition has been under consideration for some time past. The total power received through this station from the Power Company in 1934 was 1,061,047 K.W.Hrs.

### **Electric Hoists in Freight Sheds**

The electric hoists in the freight sheds have been operated and supplied with power through stations Nos. 1 and 4.

The hoist in sheds 24-25 was only operated during four days of the 1934 season but all the others compare favourably

with their operation during the previous year, as the following figures show:

Year	Hoists in Sheds	Teams &					
		Trucks carried	Days in Operation	Opening date		Closing date	
1934	2, 3, 5	18,743	191	April	26	Dec.	6
1933		16,467	214		12		16
1932		18,043	207		18		15
1934	4-6	7,369	187	April	26	Dec.	1
1933		2,584	79		21	Nov.	28
1932		1,836	66		25	Sept.	20
1934	7-9	11,660	193	April	26	Dec.	7
1933		18,617	203		15		3
1932		20,659	206		13		10
1934	8-10	14,334	189	April	30	Dec.	6
1933		12,335	203		17		9
1932		17,607	206		13		10
1934	11-12-13	7,914	201	April	17	Dec.	8
1933		11,972	207		13		13
1932		9,925	200		18		9
1934	13-15	7,697	187	May	1	Dec.	6
1933		6,734	202	April	17		9
1932		7,374	200		19		10
1934	16-17	4,463	188	April	28	Dec.	5
1933		5,945	205		17		13
1932		5,902	201		18		10
1934	18-19	12,176	192	April	28	Dec.	8
1933		13,385	221		17		30
1932		12,856	206		20		17
1934	24-25	15	4	May	4	Nov.	13
1933		487	8	Sept.	19	Dec.	1
1932		156	9	May	11	May	20

### Harbour Lighting.

The general lighting is made up of four series circuits together with 110 volt multiple lighting along the riverside of each of the freight sheds. Circuit No. 1 of the series system covers the whole of Windmill Point and Bickerdike Pier and is fed through No. 5 Sub-station. This circuit is all 1500 c.p. units during the navigation season owing to technical reasons and to its isolated position. During the winter season these units are all changed to 600 c.p. because it is then possible to tie it in with the remainder of the series system.

Circuits Nos. 2, 3 and 4 extend from McGill Street east to the Vulcan Wharf and all supplied from Sub-station No. 4, these units being all 600 c.p.

In addition to the multiple lighting along the riverside of the freight sheds, there is also a multiple system on the Canada Cement Wharf and each of the Oil Wharves from Sections 100 to 110. These units are all 300 watts placed at the extremity of each wharf to act as a beacon for navigation purposes.

The multiple systems along the side of the sheds are all 400 watts.

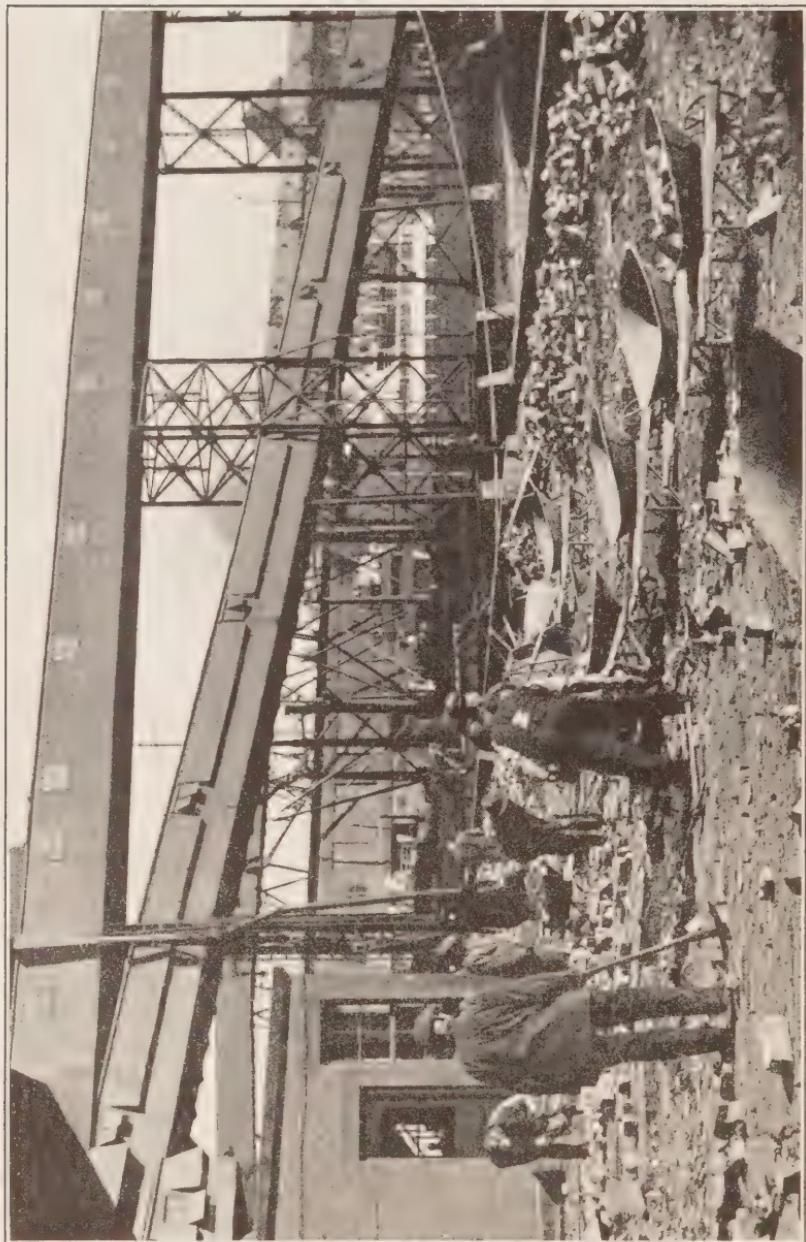
Additional lights were added during the year. On the British American Oil Wharf two range lights were installed with green lenses to meet the requirements of the shipping regulations. These were first put into service on the night of October 19th.

Four series lamps were installed at the extremity of each of the sawtooth wharves between sections 27 and 35, two still remain to be erected and cannot be installed before next Spring when the coal will have been cleared from the wharves and so allow the work to be completed. These lights are also intended as beacons.

The total number of units in operation during the navigation season was 530 including the outside shed lighting, but for the winter season this number is reduced to approximately 130.

PAVING WORK IN PROGRESS ON THE WHARVES

Photo: Associated Screen News



### Jacques-Cartier Bridge Lighting.

A series system is also maintained on the Jacques-Cartier Bridge and fed from Station No. 4. These are all 600 c.p. units except for two 1500 c.p. units suspended below the Bridge steel to indicate the Channel. The total number in use on the Bridge is 180.

The lights are distributed as follows:

Series	No. of units
Circuit	
No. 1 Windmill Point at Bickerdike Pier.....	59
No. 2 McGill St. to East end of Shed 11.....	74
No. 3 East end of Shed 11 to east end of Warehouse.....	79
No. 4 East end of Warehouse to Racine Pier... Marine Tower Jetty at No. 2 Elevator..	127
Outside Shed Lighting.....	154
Montreal East Wharves.....	21

### General:

The Electric Railway System was not added to in any way, the only work having been carried out being of a purely maintenance character.

A change was made in the Electric Power System in distribution room No. 2. This was formerly equipped with three 1,000 KVA, Water Cooled Transformers requiring the presence of an operator at all times when Elevator No. 2 was in operation. These units were removed to Station No. 1 which is equipped with a water re-cooler thus saving the costs of using City water and where they are under the supervision of the operators who are always on duty during elevator operations. In order to do this, the Commissioners purchased three 833 KVA Oil Cooled Transformers which require no supervision whatsoever apart from periodical inspection, thus effecting a further economy. With the completion of this transfer, a number of old transformers were taken out of Station No. 1 and sold as scrap after serving the plant for some 20 to 25 years.

The services to outside Companies were maintained throughout the year with minor alterations here and there and small additions at different times at the request of the individual Companies.

## MAINTENANCE

### **Wharves:**

The Maintenance Force, in addition to the usual patching of wharves, examination of and attention to sewer outlets, intake pipes and crib seats, taking care of bollards, ladders, fenders, temporary pile clusters, landings and floating platforms used during the season by the different industrial companies in the Harbour, as well as the Elevator No. 2 Jetty bridges and stairs, carried out the following works:—

### **Bickerdike Pier:**

Section 5-E.—Rebuilt 318 lin. ft. of face, 10 ft. high and 12 ft. deep;

Section 11-E.—A contract was awarded to the Western Waterproofing Co. for the restoration or resurfacing of approximately 461 lin. ft. of part of the face of the Bickerdike Pier concrete quay wall.

All of the old portion of the downstream end of this pier amounting to 303 lin. ft. together with approximately 158 lin. ft. of the Eastern face, was completely cleaned, reinforced and resurfaced with the gunite process from the top of the timber crib to cope level elevation 119.00 or approximately 25 ft. high.

### **Alexandra Pier:**

Rebuilt 170 lin. ft. of face along Shed No. 3, 19 ft. high and 12 ft. deep.

### **Jacques-Cartier Pier:**

Rebuilt 450 lin. ft. of face along Shed No. 6, 10 ft. high and 12 ft. deep.

### **Section 42:**

Rebuilt 300 lin. ft. of face along shore wharf, 6 ft. high and 16 ft. deep.

### **Marine Pier, Elevator No. 3:**

The restoration of the face of the Marine Pier on three sides at the water's edge for an approximate height of 2 ft. was also carried out during the season by [the] Western Waterproofing Co.

### **Sutherland Pier:**

Rebuilt 100 lin. ft. of face along outer end, 7 ft. high and 16 ft. deep; also 150 lin. ft. on downstream return end, 7 ft. high and 16 ft. deep.

The safety ladders built in the various wharves, which are used to reach the cope of the wharf from the water level, were thoroughly overhauled. In all, some 350 ladder rungs were added or replaced from Bickerdike Pier to Tarte Pier.

### **Buildings:**

In addition to the usual maintenance of transit sheds, grain elevator buildings, Cold Storage Warehouse Building, etc., the following more important items were carried out during the year:

Shed No. 6 Extension.—Exterior painted two coats.

Shed No. 16.—Tar and gravel roof was completely renewed, including all flashings and gutters. New asphalt floor was laid on lower deck.

Shed No. 18.—Interior painted two coats.

Shed No. 19.—Exterior structural steel painted.

About 4,300 lin. ft. of rain spouts and gutters were renewed on sheds and 7,400 lin. ft. of metal flashing was renewed on sheds and elevators during the season.

Elevator No. 1.—4,850 sq. ft. of corrugated sheeting renewed on Marine Tower and all tower structural steel painted two coats.

Cold Storage Power House.—58 old steel sash renewed, glazed and painted.

Electric Hoists.—Nos. 1, 2, 3, 5 and 9 painted two coats.

Harbour Yard.—The restoration of the exterior and part of the interior walls and ceilings of the building was carried out during the season by the Gunite & Waterproofing Ltd.

Elevator No. 2.—The resurfacing of the interior concrete wall above the bin floor as well as the rebuilding of cracked or faulty ribs was carried out by the Western Waterproofing Co., during 1934.

## PLUMBING

The laying of sewer and water main extensions, the equipment of lavatory rooms, the repair and renewal of the plumbing system along the waterfront, including all buildings, transit sheds, grain elevators, owned by the Commissioners, were carried out by the usual plumbing force.

### Roadways, Sheds, Water Service, etc.

The general cleaning and watering of the wharves, roadways and sheds as well as flushing of latrines, drains and freight hoists and periodical checking of all water meters was kept up during the season.

Water service to sheds and latrines was connected up by April 30th, and kept in good order throughout the season. This service was discontinued on December 8th, excepting sheds 8 and 47, which were kept open during the Winter.

The sheds were kept clear of all rubbish throughout the season, the refuse, totalling 5,769 loads, being put on scows placed at the sheds for this purpose, and the scows taken away regularly when loaded. 14 scows were used during the season for this service.

3,442,500 cu. ft. of fresh water was supplied to 594 ships during the navigation season.

The Quick Acting Gates in the Flood Protection Wall were kept in good working order at all times, and the steps placed at sections 12, 14, 15, 18 and 19 for the purpose of allowing pedestrians on and off the wharves when the Flood Gates are closed, during the winter season only, were kept free of snow and ice. The flood gates at Sec. 12 and 17 were kept in operation throughout the Winter.

The usual force of watchmen, etc., was employed to protect the property of the Commissioners, to guard the public from accident and to regulate the Harbour dumping grounds.

### **Life Saving Equipment.**

The usual precautions were taken to facilitate the saving of life and the prevention of accidents by the maintenance of railings and the distribution of ropes, gaffs and life preservers at frequent intervals along the waterfront, and these proved their value on a number of occasions during the season.

### **Fire Protection.**

All hydrants and fire equipment were inspected daily and kept in readiness for service. All fire extinguishers were recharged on April 22nd, and kept in operating condition by daily inspections.

### **Railway Tracks.**

The usual track maintenance from Sections 12 to 101, including the replacement of rails, turnouts, switches, cross ties, upkeep of roadbed, maintenance of way, snow removal, etc., etc., was carried out throughout the season by the railway section gangs.

### **Jacques Cartier Bridge and approaches.**

General maintenance of the Jacques Cartier Bridge and approaches was carried out during the year including repairs to concrete and asphalt, painting, clearing away of snow from the roadway and foot path, etc.

### **Paving.**

1290 Square Yards of paving blocks were lifted and renewed on piers and roadways.

900 Square yards of paving blocks were lifted and renewed along Common St. between McGill and St. Peter Streets.

711 Square Yards of granite blocks were laid over a new 6" concrete base at West End of Elevator No. 1.

## MECHANICAL EQUIPMENT

The grain handled through the elevators continued to be far below the capacity of the equipment, and consequently the maintenance and upkeep items were proportionally small.

The principal items of equipment attended to during the year were:—

### Elevator "B".

A new 60 H.P. chain drive was installed on Marine Leg No. 2, replacing the 100 H.P. rope drive. A new 25 H.P. motor was installed to drive Air Compressor Winch and clean-up shovels replacing the 15 H.P. motor driving Air Compressor.

2-75 H.P. chain drives were installed on drives from old house to Tower "A" replacing rope drives.

The necessary maintenance and repairs were also carried out on general grain handling equipment.

### Elevator No. 1.

A new 60 H.P. chain drive was installed on Marine Leg No. 1 replacing the 100 H.P. rope drive.

A new 30 H.P. chain drive was installed to drive winch and clean-up shovels.

2-150 H.P. chain drives were installed, on loft legs 10 and 11 replacing rope drives.

A new steel bagging platform was built.

The necessary maintenance and repairs were also carried out on general grain handling equipment.

### Elevator No. 2.

2-35 H.P. chain drives were installed on distributing floor replacing rope drives.

1-15 H. P. chain drive was installed for hoisting winch on distributing floor.

3-125 H.P. chain drives were installed, on shipping legs 13, 14 and 15.

The 2-12000 lb. Avery Automatic Scales installed in the Marine Tower having stood up to the Guarantee for one year and given complete satisfaction from October 7th, 1933 to October 7th, 1934, were finally accepted by the Commissioners.

The necessary maintenance and repairs were also carried out on general grain handling equipment.

### **Elevator No. 3.**

The necessary maintenance and repairs were carried out; there was no new work done.

### **Shiploaders.**

The booms of shiploaders Nos. 8 and 10 were lengthened by 9'0" to meet the requirements of the C.P.S. Duchess ships.

## **ELEVATOR AND CONVEYOR BELT REPLACEMENTS**

### **Elevator No. 1.**

One 35" x 7 ply x 444 ft. long No. 5 loft leg.

### **Elevator No. 2.**

One 26" x 7 ply x 250 ft. long. Marine Leg.

One 36" x 4 ply x 500 ft. long. No. 2 Marine Conveyor.

### **Elevator No. 3.**

One 36" x 4 ply x 675 ft. long. No. 1 Marine tunnel.

### **Elevator "B".**

One 24" x 7 ply x 145 ft. long. Marine Leg.

### **Galleries.**

One 36" x 4 ply x 550 ft. long. No. 5a Gallery.

One 36" x 4 ply x 500 ft. long. No. 5a Gallery.

One 36" x 4 ply x 500 ft. long. No. 12a Gallery.

One 36" x 4 ply x 480 ft. long. No. 12a Gallery.

### **Hoists.**

All shed hoists were overhauled, platforms repaired where necessary and 10 hoisting and counterweight cables were renewed.

The Cold Storage and Head Office hoists were overhauled, and necessary repairs were made.

### **Cold Storage Plant Equipment.**

The refrigerating equipment in both the Warehouse and the Power House continued to give satisfactory service throughout the year and was maintained in good operating condition. Cork insulation on the Brine lines was repaired, cleaned, rewired and painted by Armstrong Cork and Insulation Co. During the year, 2742-100 lb. block of ice were made and delivered to various Harbour works and fleet.

### **Harbour Yard Shops.**

Due to continued comparative shortage of work during the year, the shop forces were kept at a minimum, working only 40 hours per week, for the greater part of the year.

The total number of orders executed in these shops and their allocation were as follows:

Elevator No. 1.....	35
Elevator No. 2.....	55
Elevator No. 3.....	33
Elevator "B".....	25
Conveyor System.....	32
Electrical Department.....	107
Loco. Cranes.....	70
Guard Pier & Shipyard.....	125
Traffic Dept.....	241
Cold Storage.....	28
General.....	414
 Total.....	 1,165

A wide variety of work was carried out in these shops in a satisfactory manner.

### Floating Plant.

Vessels wintering on the Commissioners' shipways were Derricks No. 3 and No. 8. Their hulls were practically rebuilt, machinery and boilers overhauled.

Two new 100 ft. x 30 ft. wooden scows were built. Scow No. 60 was hauled up on the ways during the summer for repairs to damage done by Barge "Blue Cross".

Tugs "Robert MacKay" and "St. Peter" were hauled up on the ways for repairs to hull.

Dust Scow No. A3 was hauled up on the ways for repairs.

Scows 58, 62, 63, 65 and 67 were repaired during the summer.

The necessary repairs to the fleet were carried out and the following units were put in commission at the opening of navigation:

Tug "Sir Hugh Allan."

Tug "Aberdeen".

Tug "St. Peter".

Yacht "Messenger".

Dredge No. 6.

Derricks Nos. 1 and 8.

75 Ton Floating Crane.

Testing Boat.

Pile Driver.

During the season, the tug "John Young" and Derrick No. 6 were fitted out in case of emergency.

The tug "Sir Hugh Allan" wintered on dock at Canadian Vickers for the renewal of two upper decks, painting, etc.

On September 18th, tug "Sir Hugh Allan" was dry-docked at Canadian Vickers for repairs to tail shaft, and was undocked September 22nd.

The Floating Crane wintered on Vickers' Dock for overhauling and Painting.

### FLOATING CRANE

The record of work done by the following crane is as follows:—

Number of working days.....	206
Number of days work.....	73

#### Total Number of lifts.

Commercial.....	319
Commissioners' service.....	59
<hr/>	
	378

#### Average weight of lifts:

Commercial.....	7 tons
Commissioners' service.....	15 "

#### Greatest lift:

Commercial.....	60 "
Commissioners' service.....	75 "

#### Greatest tonnage from single ship:

SS. "Tyrifjord".....	274 "
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#### Total weight lifted:

Commercial.....	2,376 "
Commissioners' service.....	892 "
<hr/>	
	3,268 "
Total weight lifted, season 1933.....	5,363 "
Total number of lifts made, season 1933	496 "

### LOCOMOTIVE CRANES

The amount of coal handled by our cranes from ships was less by some 100,000 tons than last year. The distribution of working time is as follows:

	1934	1933	1932	1931
On coal.....	69.8%	89.1%	88%	82%
On Harbour work.....	21.0%	5.3%	9%	7%
On miscellaneous work:	9.2%	5.6%	3%	11%

**PUBLIC WORKS CONSTRUCTION ACT, 1934****Item 104—Repaving of certain surfaces.**

The following lanes of traffic were completely repaved during the season.

1. The Bulkhead Wharf at Elevator No. 2 between shed No. 13 and shed No. 16;
2. The whole of Victoria Pier High Level;
3. The high level Market Basin from Victoria Pier to the west side of Berri St. subway.
4. The roadway along sheds Nos. 24 and 25 from the Cold Storage Power House to the top of the western end ramp of Papineau St. subway.

Approximately 425,000 granite blocks were laid for the reconstruction of the above roadways.

**Item 105.—Reconstruction of Raceways at Windmill Point.**

A contract for the demolition and reconstruction of Raceways 1-6 and 8-9 Windmill Point Wharf, sections 5W, 6W, 7W and part of 8W, was awarded by the Government to the Atlas Construction Co. late this year. Work was immediately started on a portion of this contract, namely the laying of a new 10" Fire and Water service main from Mill Street to Elevator "B", to permit the cutting of the existing main along the Windmill Pt. Wharf when the work on the reconstruction of these raceways is started.

**Item 106.—Certain protection work at Elevator No. 3.**

During recent years and particularly since the construction of Elevator No. 3, the Bulkhead Wharf between Laurier and Tarte Piers, which was built between 1901 and 1907, has shown signs of settlement and deformation.

To ensure the stability of this bulkhead wharf, certain protection works had to be carried out in front and along this quay wall and a contract for these reinforcement works, which consist of a system of interlocked steel cells built in front of the existing wharf, was awarded by the Government to Angus Robertson, Ltd.

These cells are constructed of interlocked steel sheet piling driven to rock. The width of the structure varies from 59' 0" between Tarte Pier and the Marine Tower Jetty to 66'0" between the Marine Tower Jetty and Laurier Pier. The cells are backfilled with rock, and a concrete cope wall supported on piles is carried around the outer edge.

**Item 107.—Railway Track Embankment.—Sec. 101-110 Montreal East.**

The industrial wharves constructed during the last few years at Montreal East below section 101, could not be served by the Commissioners' Railway which has its present terminus at the Imperial Oil Company's wharf.

To insure a maximum development of these wharves, it was most important that they be given railway facilities and for this purpose, it was decided to extend the railway as far as the Marien Street Wharf at Montreal East.

A contract was awarded by the Government to H. J. O'Connell & Co. for the construction of a double track embankment from sections 101 to 106, i.e. from the Imperial Oil to the Shell-Lasalle, Sun Oil and British American Oil wharves; and a single track embankment from sections 106 to 110 or the Marien St. Wharf.

Work was started in November and by the end of the year 60% of the estimated amount of filling material was deposited into place, and it is expected that the contract will be completed early next year.

**Item 108.—Raising of Wharf, Sec. 38, 39 and 40.**

A contract was given by the Government to E. G. M. Cape & Co. for the raising of the shore wharf from the downstream end of the wharf now under lease to the Dominion Coal Co. in a northerly direction along sections 38, 39 and 40, in all a distance of approximately 970 lin. ft. by a height of approximately 13 ft., and including the removal and putting back of the necessary bollards, the installation of safety ladders, anchor rods with their fittings and reinforced concrete anchor blocks.

This work was started in November and successfully completed before the end of the year.

Another contract was awarded to H. J. O'Connell & Co. Ltd., for the supply of backfilling material, to reclaim the area behind the newly raised portion of this wharf. It is expected that deliveries will begin early next year and that the work will be completed soon after the opening of navigation in 1935.

#### **Item 109.**

The entire structural steel superstructure of the Jacques-Cartier Bridge including all steel work between the abutment at the Montreal end of the Bridge and the abutment at the Montreal South end of the Bridge was painted for the first time since it was open to traffic in 1930.

A contract was awarded by the Government to F. J. Leduc and Associates who carried out this work.

The steel and iron supports forming part of the railings and guards on the structure on both sides of the driveway and on both sides of the footpaths as well as the St. Helen's Island ramps and all lamp posts and trolley poles were painted by the Harbour Commissioners' own forces.

In all, approximately 32,300 tons of steel were painted, 6,400 gallons of paint were used including some 160 gallons of red lead.

#### **EMPLOYMENT IN THE HARBOUR OF MONTREAL**

The following table shows the maximum and average number of workmen employed by the Harbour Commissioners during the season of 1934, in the various operations of the Port, exclusive of men employed by the different contractors on Harbour construction work:—

	Average	Maximum
Grain Elevator System—Operation.....	279	358
Master Mechanic's Gang.....	32	122
Harbour Yard Machine Shop.....	81	113
Guard Pier Repair Shop.....	34	45
Shipyard .....	55	75
Cold Storage Warehouse and Power House	50	62
Electrical Branch.....	88	132
Roads and Water Branch.....	50	53
Roadmaster's Branch.....	116	156
Plumbers.....	5	8
Wharf Repairs.....	20	24
Shore Equipment (Loco. Crane Operation)	27	33
Sheds.....	27	123
Dredging Fleet: Crews of tugs, derricks, etc	95	108
Traffic Dept.....	84	99
Police Department.....	46	48
Jacques Cartier Bridge—Toll Collectors..	19	19
Fleet Watchmen.....	13	14
Public Works Construction Act, 1934.....	179	276

### WATER LEVELS

The depth of water for navigation in the Montreal Harbour Ship Channel and on the Sill of Lower Lock, Lachine Canal, is given below:

	Depth on Old Lock Sill, Lachine Canal		Depth in Harbour Channel	
	Average 1925-34	Average 1934	Average 1933	Average 1934
May.....	19'0"	18'6"	34'11"	33'11"
June.....	17'0"	15'6"	31'4"	30'11"
July.....	15'10"	13'11"	29'7"	29'4"
August.....	14'11"	12'2"	29'3"	28'7"
September.....	14'2"	11'10"	28'7"	28'3"
October.....	14'3"	11'10"	27'10"	28'3"
November.....	14'10"	11'9"	27'6"	28'2"

AVERAGE DEPTH FOR EACH MONTH IN THE 30-FOOT CHANNEL AT SOREL  
 (30 Feet at Extreme Low Water of 1897)

Year	May	June	July	August	September	October	November	High	Low
1920 . . . . .	33' 7"	30' 10"	30' 4"	29' 9"	29' 4"	29' 4"	29' 4"	34' 8"	28' 3"
1921 . . . . .	34' 7"	31' 9"	30' 10"	31' 7"	29' 10"	30' 2"	30' 5"	37' 6"	30' 1"
1922 . . . . .	36' 0"	33' 9"	34' 2"	32' 2"	31' 2"	31' 3"	30' 11"	37' 8"	30' 1"
1923 . . . . .	38' 4"	34' 6"	32' 4"	31' 5"	31' 4"	30' 11"	30' 9"	39' 1"	30' 0"
1924 . . . . .	38' 7"	34' 5"	32' 5"	31' 10"	31' 11"	32' 3"	31' 3"	40' 0"	30' 1"
1925 . . . . .	35' 2"	33' 9"	32' 4"	31' 8"	30' 11"	31' 2"	31' 9"	36' 6"	30' 3"
1926 . . . . .	37' 4"	34' 6"	32' 10"	31' 7"	31' 1"	31' 3"	33' 2"	39' 6"	30' 6"
1927 . . . . .	34' 3"	33' 11"	33' 3"	32' 5"	31' 3"	31' 4"	34' 10"	37' 8"	30' 5"
1928 . . . . .	40' 3"	36' 6"	34' 0"	33' 0"	32' 8"	34' 0"	34' 2"	41' 7"	31' 7"
1929 . . . . .	39' 11"	35' 11"	34' 4"	32' 9"	32' 2"	32' 3"	32' 3"	41' 4"	31' 3"
1930 . . . . .	36' 4"	35' 6"	35' 1"	33' 2"	32' 9"	31' 8"	31' 0"	37' 4"	30' 3"
1931 . . . . .	33' 3"	32' 6"	31' 5"	31' 5"	31' 6"	31' 5"	31' 8"	34' 4"	30' 9"
1932 . . . . .	34' 11"	33' 3"	32' 10"	33' 0"	33' 9"	34' 3"	35' 0"	36' 0"	32' 0"
1933 . . . . .	37' 4"	33' 10"	32' 6"	31' 2"	31' 7"	31' 1"	30' 10"	39' 10"	30' 1"
1934 . . . . .	36' 5"	33' 7"	32' 3"	30' 11"	30' 9"	30' 8"	30' 8"	37' 8"	29' 11"

HARBOUR COMMISSIONERS OF MONTREAL—FLOATING PLANT—1934

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Description of Vessel	Hull			When built	Engines			Capacity of Buccket	Depth to which dredge can work	ft.	c.y.	ft.	Remarks	
	Length ft.	Breadth in	Depth in		No. of cylinders	Dia. of cylinders	Length of stroke							
<b>Dredges</b>														
J. Kennedy (Boom Spoon) . . . . .	104 4	37 0	9 Fd.5	1892	Horizontal non-condensing	2	16	18	125	7	40	Steel Hull, Rblt. 1923		
No. 5 (Boom Spoon) . . . . .	104 0	36 2	11 0	1910		2	16	18	125	7	40	Steel Hull,		
No. 6 (Boom Spoon) . . . . .	104 2	39 2	10 9	1912		2	16	18	140	7	50	Steel Hull.		
<b>Derricks</b>														
No. 1 Clam shell . . . . .	87 2	31 2	9 3	1899		2	12	14	140	..	..	Wooden hull, Rblt. 1925		
No. 3 Clam shell . . . . .	77 0	27 6	8 0	1900		2	12	14	125	..	..	Wooden hull,		
No. 4 Clam shell . . . . .	80 5	27 10	7 6	1892	Horizontal non-condensing	2	12	14	125	..	..	Wooden hull,		
No. 5 Clam shell . . . . .	80 1	27 10	7 5	1892		2	12	14	125	..	..	Wooden hull,		
No. 6 Clam shell . . . . .	80 1	27 10	7 5	1892		2	12	14	125	..	..	Steel hull, Rblt. 1930.		
No. 8 Clam shell . . . . .	87 5	31 0	9 3	1915		2	12	14	140	..	..	Wooden hull, Rblt. 1929		
<b>Tugs</b>														
St. Peter (Fire Tug) . . . . .	74 8	16 1	8 6	1875	Vertical non-condensing	1	20	22	125	..	..	Wooden hull, Rblt. 1921		
Aberdeen . . . . .	79 3	18 3	9 0	1895	Vertical condensing	1	16	24	140	..	..	Steel hull.		
Robert Mackay . . . . .	80 9	17 6	10 0	1899		1	32	24	140	..	..	Steel hull.		
Sir Hugh Allan . . . . .	130 0	26 6	15 0	1911	Vertical triple expansion	1	16	24	180	..	..	Steel hull, twin screws.		
John Young . . . . .	91 8	22 0	9 0	1911	condensing	2	25	24	18	140	..	Steel hull, twin screws.		
Passe-Partout . . . . .	49 1	11 3	5 7	1912	Vertical condensing	2	24	24	10	110	..	Wooden hull, Rblt. 1925		
David Seath . . . . .	75 5	18 5	10 2	1915	Vertical high pressure	1	9	10	110	..	..	Destroyed 1934.		
Drilling and Blasting Boat . . . . .	80 0	27 0	over all 5 6	1895	Vertical condensing	1	13	22	140	..	..	Wooden hull.		
										100	..	Three 5 in. steam drills		
											..	Rebuilt 1923.		

Motor Boat "Messenger".....	30	2	6	4	3	7	1926	Red Wing 100HP
Testing Boat.....	{ 81	4	14	0	5	2	{ 1900	
	{ 81	4	14	0	5	2		
Grain Barge "Ethel".....	158	0	27	11	17	2	1910	
Dynamite Scow.....	25	0	15	0	3	4		
Floating pile driver.....	60	4	24	10	5	6	1896	
Floating Crane.....	200	5	43	10	10	0	1909	Capacity 75 tons
<b>Scows.</b>								
2 flat scows Nos. 2 and 4.....	75	0	20	2	6	0	1876	67½ Yards
1 "	" No. 22.....	85	0	25	0	7	5	1891
1 "	" No. 23.....	85	0	25	0	6	9	1891
1 "	" No. 27.....	85	0	25	0	6	9	1892
1 "	" No. 31.....	85	0	25	0	6	9	1893
1 "	" No. 34.....	85	0	25	0	6	9	1893
7 "	" Nos. 51, 52, 55 to 60	100	0	30	0	9	0	1911 } 1923 } 300
2 "	" Nos. 61 and 62.....	100	0	30	0	9	0	1925 } 300
4 "	" Nos. 63-66.....	100	0	30	0	9	0	1926 } 300
1 "	" No. 67.....	100	0	30	0	9	0	1927 } 300
2 "	" Nos. 68 and 69.....	100	0	30	0	9	0	1934 } 300
1 "	" No. A-5.....	40	0	15	0	3	4	
2 "	" Nos. A-6 and A-7.....	40	0	24	9	4	6	
3 Dump scows Nos. 36, 37 and 38.....	106	0	26	10	9	6	1900	200 Yards
1 wharf repair scow No. A-4.....	40	0	15	0	3	4		
1 diver's scow No. A-1.....	46	3	18	0	4	3	1924	
2 dust scows Nos. A-2 and A-3.....	45	4	15	0	3	4	1926	
Timber storage scow.....	101	0	35	0	8	6		
8 flat scows Nos. 28, 35, 39, 40, 41, 42, 50 and 53.....								Totally unfit for use. N o. 39 sold June 1934.
2 "	" Nos. 44 and 47.....							Sold October 1934.
1 "	" No. 46.....							Sold August 1933, delivered June 1934.
Wooden hull.								Old hull of floating concrete machine.
Two wooden hulls braced 16 ft. apart; overhauled 1924.								Machinery removed 1931.

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